Full wwPDB EM Validation Report ⓘ

Jan 29, 2024 – 02:08 PM JST

PDB ID	:	8Y0X
EMDB ID	:	EMD-37992
Title	:	Dormant ribosome with SERBP1
Authors	:	Du, M.; Zeng, F.
Deposited on	:	2024-01-23
Resolution	:	3.30 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

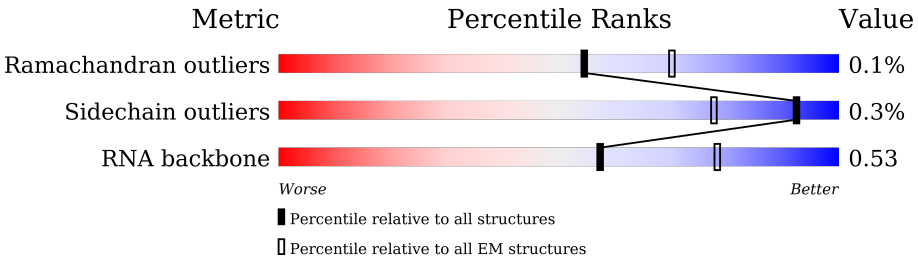
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	L5	5070	55% 16% 28%
2	L7	121	90% 9%
3	L8	157	80% 18%
4	LA	257	96%
5	LB	403	100%
6	LC	427	85% 15%
7	LD	297	98%
8	LE	288	76% 24%

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Mol	Chain	Length	Quality of chain
9	LF	248	90% 9%
10	LG	266	86% 13%
11	LH	192	99%
12	LI	214	94% 6%
13	LJ	178	97%
14	LL	211	99%
15	LM	215	65% 35%
16	LN	204	99%
17	LO	203	99%
18	LP	184	83% 17%
19	LQ	188	99%
20	LR	196	85% 14%
21	LS	176	99%
22	LT	160	98%
23	LU	128	77% 21%
24	LV	140	93% 6%
25	LW	157	40% 60%
26	LX	156	74% 25%
27	LY	145	92% 8%
28	LZ	136	99%
29	La	148	99%
30	Lb	159	6% 69% 31%
31	Lc	115	83% 15%
32	Ld	125	85% 14%
33	Le	135	95% 5%

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Mol	Chain	Length	Quality of chain
34	Lf	110	97%
35	Lg	117	97%
36	Lh	123	98%
37	Li	105	96%
38	Lj	97	88% 11%
39	Lk	70	99%
40	Ll	51	98%
41	Lm	128	41% 59%
42	Ln	25	96%
43	Lo	106	92% 8%
44	Lp	92	99%
45	Lr	137	91% 9%
46	S2	1869	70% 22% 7%
47	S	402	8% 10% 90%
48	E	85	59% 62% 32% 6%
49	SA	295	74% 26%
50	SB	264	81% 19%
51	SN	151	99%
52	SO	151	89% 11%
53	SP	145	83% 17%
54	SQ	146	6% 95%
55	SR	135	8% 96%
56	SS	152	6% 95% 5%
57	ST	145	10% 97%
58	SU	119	8% 86% 13%

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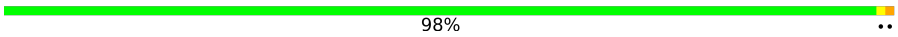
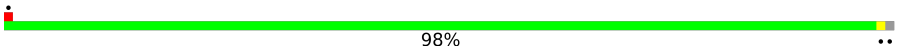
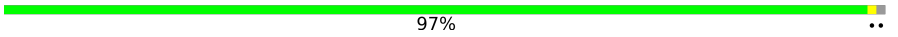
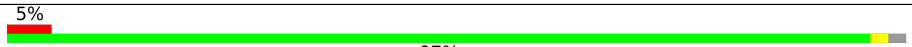
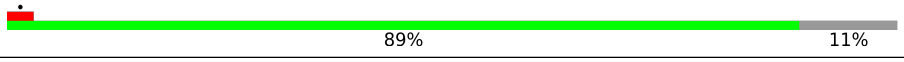
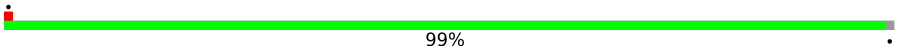
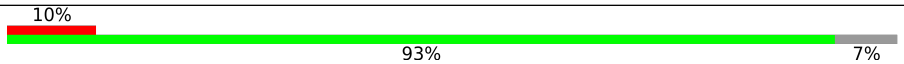
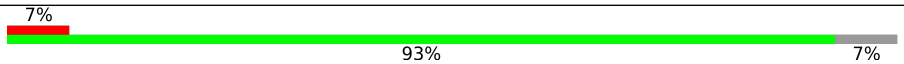
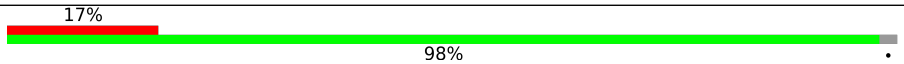
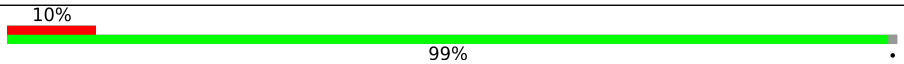
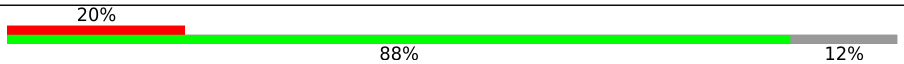
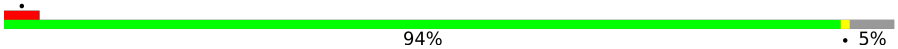
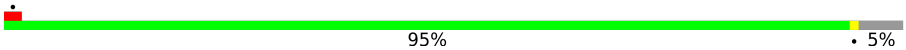
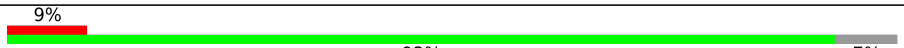
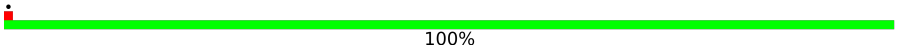
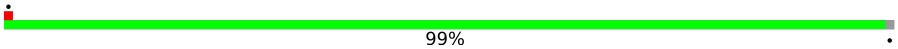
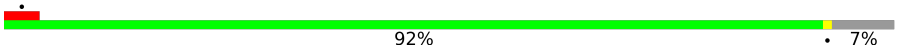
Mol	Chain	Length	Quality of chain
59	SV	83	
60	SW	130	
61	SX	143	
62	SY	133	
63	SZ	125	
64	Sa	115	
65	Sb	84	
66	Sc	69	
67	Sd	56	
68	Se	59	
69	Sg	317	
70	CB	858	
71	SG	249	
72	SJ	194	
73	SC	293	
74	SF	204	
75	SH	194	
76	SD	243	
77	SE	263	
78	SI	208	
79	SK	165	
80	SL	158	

2 Entry composition

There are 82 unique types of molecules in this entry. The entry contains 218903 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	L5	3658	78419	34920	14351	25491	3657	0	0

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	L7	120	2561	1141	456	844	120	0	0

- Molecule 3 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	L8	156	3314	1480	585	1094	155	0	0

- Molecule 4 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	LA	248	1898	1189	389	314	6	0	0

- Molecule 5 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	LB	402	3238	2060	608	556	14	0	0

- Molecule 6 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	LC	365	2908	1829	580	486	13	0	0

- Molecule 7 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LD	293	Total	C	N	O	S	0	0
			2382	1507	434	427	14		

- Molecule 8 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	219	Total	C	N	O	S	0	0
			1764	1136	334	290	4		

- Molecule 9 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	LF	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

- Molecule 10 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	231	Total	C	N	O	S	0	0
			1867	1191	359	313	4		

- Molecule 11 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	LH	190	Total	C	N	O	S	0	0
			1518	956	284	272	6		

- Molecule 12 is a protein called 60S ribosomal protein L10-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LI	202	Total	C	N	O	S	0	0
			1634	1037	314	269	14		

- Molecule 13 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	172	Total	C	N	O	S	0	0
			1381	868	258	249	6		

- Molecule 14 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LL	210	Total	C	N	O	S	0	0
			1701	1064	352	281	4		

- Molecule 15 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LM	139	Total	C	N	O	S	0	0
			1138	730	218	183	7		

- Molecule 16 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LN	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 17 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LO	201	Total	C	N	O	S	0	0
			1650	1063	321	261	5		

- Molecule 18 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LP	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 19 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LQ	187	Total	C	N	O	S	0	0
			1513	944	314	250	5		

- Molecule 20 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LR	168	Total	C	N	O	S	0	0
			1397	867	300	221	9		

- Molecule 21 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LS	175	Total	C	N	O	S	0	0
			1453	925	283	235	10		

- Molecule 22 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LT	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 23 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LU	101	Total	C	N	O	S	0	0
			825	529	144	150	2		

- Molecule 24 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LV	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 25 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	63	Total	C	N	O	S	0	0
			528	337	103	85	3		

- Molecule 26 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LX	117	Total	C	N	O	S	0	0
			958	612	179	166	1		

- Molecule 27 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LY	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 28 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LZ	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 29 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	La	147	Total	C	N	O	S	0	0
			1162	736	237	186	3		

- Molecule 30 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lb	109	Total	C	N	O	S	0	0
			876	546	189	137	4		

- Molecule 31 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Lc	98	Total	C	N	O	S	0	0
			764	485	135	138	6		

- Molecule 32 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Ld	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 33 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Le	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 34 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lf	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 35 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Lg	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 36 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Lh	122	Total	C	N	O	S	0	0
			1015	641	205	168	1		

- Molecule 37 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Li	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 38 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lj	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 39 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Lk	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 40 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Ll	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 41 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lm	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 42 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Ln	24	Total	C	N	O	S	0	0
			230	139	62	26	3		

- Molecule 43 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lo	98	Total	C	N	O	S	0	0
			805	504	165	130	6		

- Molecule 44 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lp	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 45 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Lr	125	Total	C	N	O	S	0	0
			1002	622	207	168	5		

- Molecule 46 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	S2	1739	Total	C	N	O	P	0	0
			36875	16449	6594	12094	1738		

- Molecule 47 is a protein called Isoform 2 of SERPINE1 mRNA-binding protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
47	S	40	Total	C	N	O	0	0
			318	188	65	65		

- Molecule 48 is a RNA chain called EtRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	E	80	Total	C	N	O	P	0	0
			1708	761	305	562	80		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	34	U	A	variant	GB 2634358191
E	83	C	U	variant	GB 2634358191

- Molecule 49 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SA	219	Total	C	N	O	S	0	0
			1733	1102	303	320	8		

- Molecule 50 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SB	214	Total	C	N	O	S	0	0
			1738	1103	310	311	14		

- Molecule 51 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SN	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 52 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SO	134	Total	C	N	O	S	0	0
			1002	612	197	187	6		

- Molecule 53 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SP	121	Total	C	N	O	S	0	0
			985	623	185	170	7		

- Molecule 54 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SQ	140	Total	C	N	O	S	0	0
			1107	704	209	191	3		

- Molecule 55 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SR	131	Total	C	N	O	S	0	0
			1060	666	195	194	5		

- Molecule 56 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SS	145	Total	C	N	O	S	0	0
			1198	751	242	203	2		

- Molecule 57 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	ST	141	Total	C	N	O	S	0	0
			1101	690	212	196	3		

- Molecule 58 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SU	103	Total	C	N	O	S	0	0
			817	511	155	147	4		

- Molecule 59 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

- Molecule 60 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 61 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 62 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SY	131	Total	C	N	O	S	0	0
			1065	673	209	178	5		

- Molecule 63 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SZ	62	Total	C	N	O	S	0	0
			480	308	84	87	1		

- Molecule 64 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Sa	102	Total	C	N	O	S	0	0
			821	512	171	133	5		

- Molecule 65 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Sb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 66 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Sc	64	Total	C	N	O	S	0	0
			506	308	102	94	2		

- Molecule 67 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Sd	52	Total	C	N	O	S	0	0
			436	273	88	70	5		

- Molecule 68 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Se	58	Total	C	N	O	S	0	0
			459	284	100	74	1		

- Molecule 69 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Sg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 70 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	CB	755	Total	C	N	O	S	0	0
			5904	3753	1014	1099	38		

- Molecule 71 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 72 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 73 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SC	219	Total	C	N	O	S	0	0
			1700	1100	292	298	10		

- Molecule 74 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SF	181	Total	C	N	O	S	0	0
			1438	900	270	261	7		

- Molecule 75 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SH	186	Total	C	N	O	S	0	0
			1497	956	274	266	1		

- Molecule 76 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SD	227	Total	C	N	O	S	0	0
			1765	1125	317	315	8		

- Molecule 77 is a protein called 40S ribosomal protein S4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	SE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 78 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	SI	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

- Molecule 79 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	SK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 80 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	SL	147	Total	C	N	O	S	0	0
			1205	769	227	203	6		

- Molecule 81 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
81	L5	211	Total	Mg	0
			211	211	
81	L7	3	Total	Mg	0
			3	3	
81	L8	5	Total	Mg	0
			5	5	
81	LA	1	Total	Mg	0
			1	1	
81	LI	1	Total	Mg	0
			1	1	
81	LP	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms	AltConf
81	LV	1	Total Mg 1 1	0
81	La	1	Total Mg 1 1	0
81	Le	1	Total Mg 1 1	0
81	Lg	1	Total Mg 1 1	0
81	S2	29	Total Mg 29 29	0

- Molecule 82 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

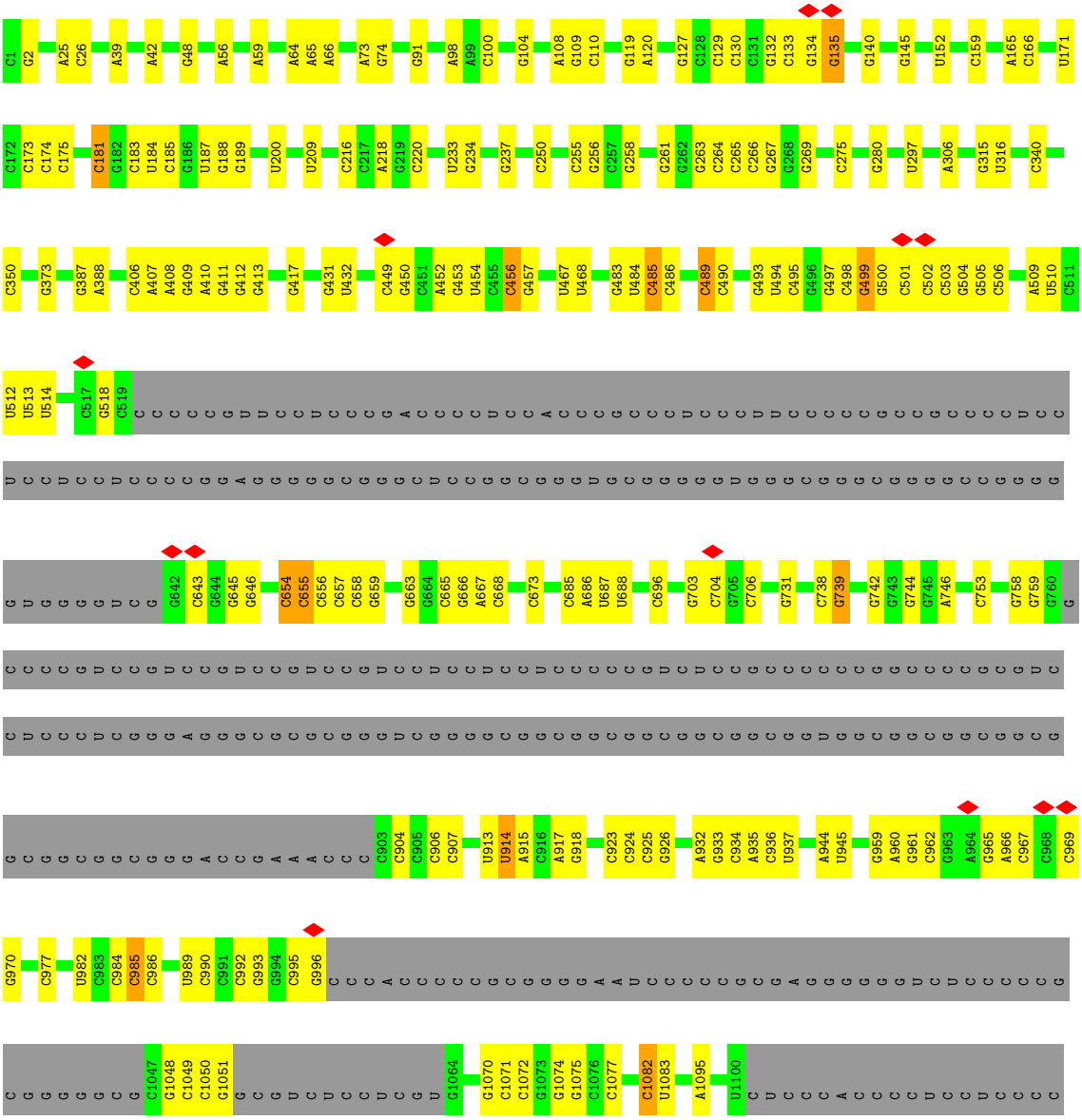
Mol	Chain	Residues	Atoms	AltConf
82	Lg	1	Total Zn 1 1	0
82	Lj	1	Total Zn 1 1	0
82	Lm	1	Total Zn 1 1	0
82	Lo	1	Total Zn 1 1	0
82	Lp	1	Total Zn 1 1	0
82	Sa	1	Total Zn 1 1	0
82	Sd	1	Total Zn 1 1	0

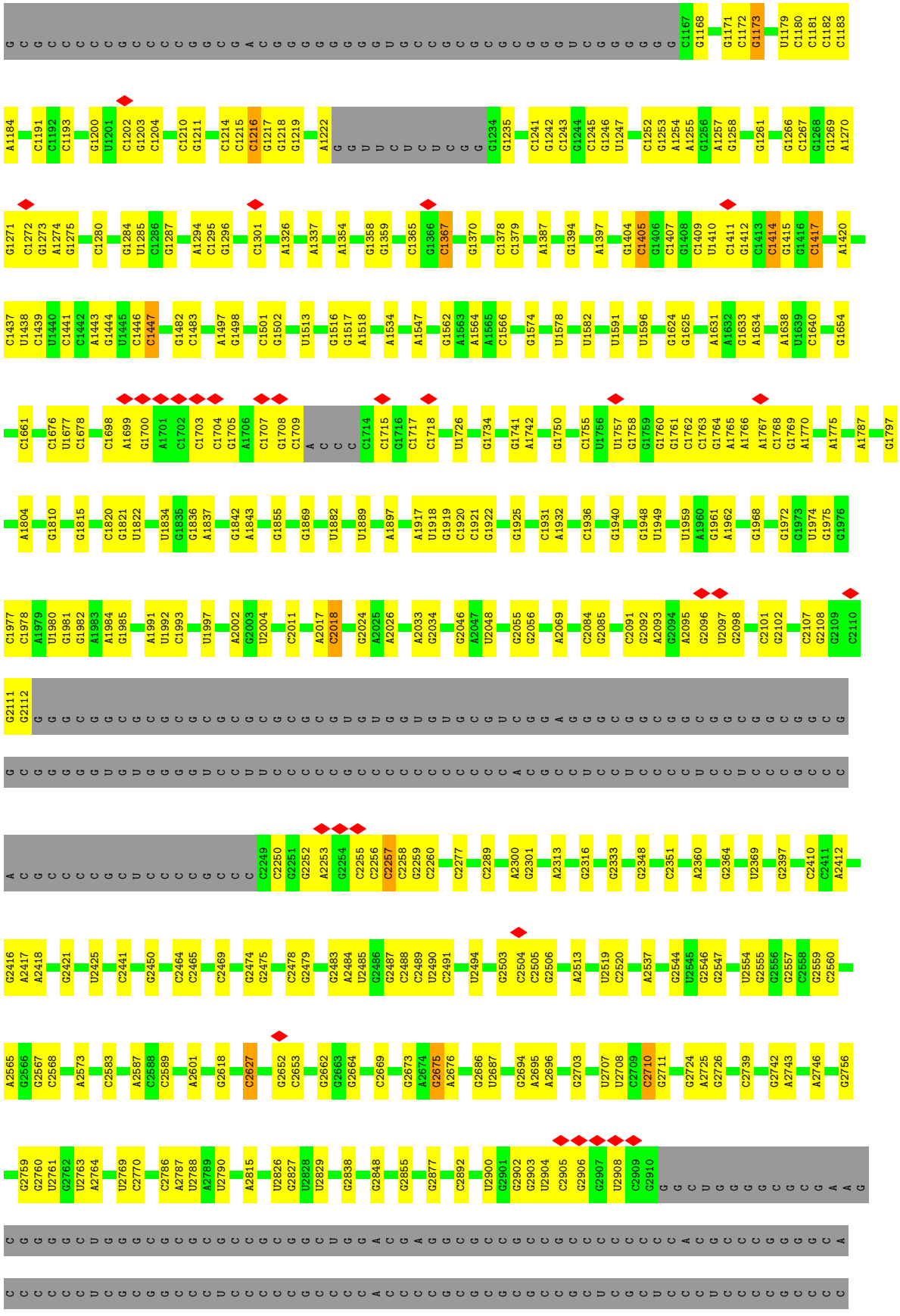
3 Residue-property plots (i)

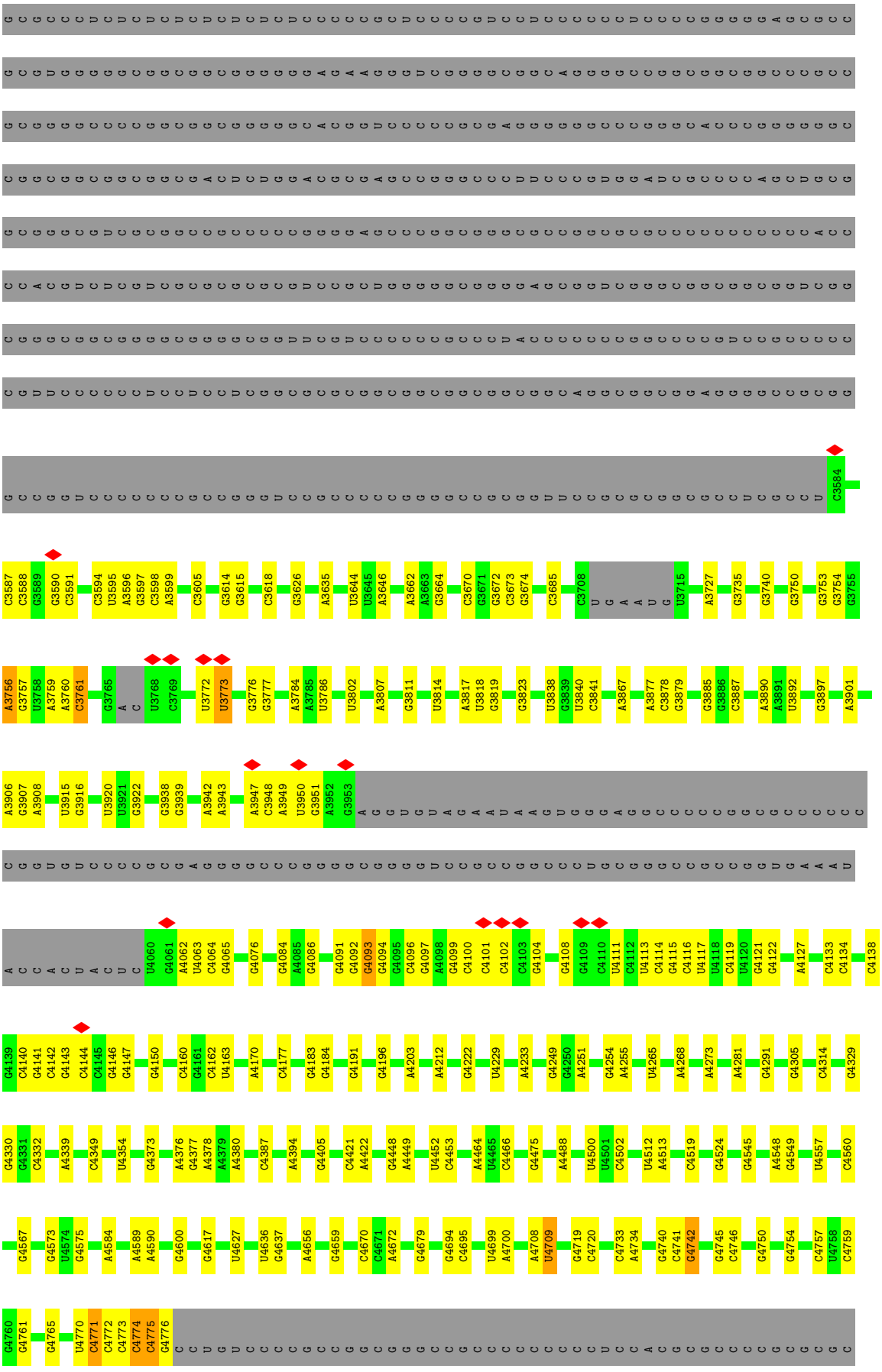
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

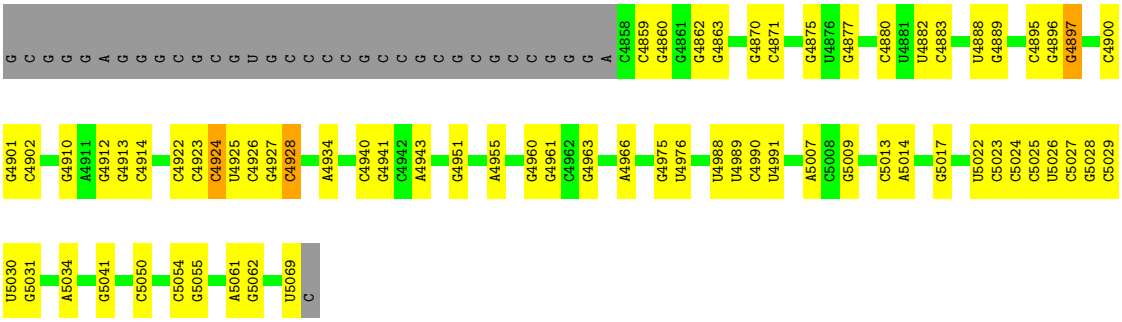
- Molecule 1: 28S rRNA

Chain L5:



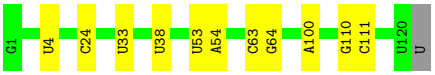






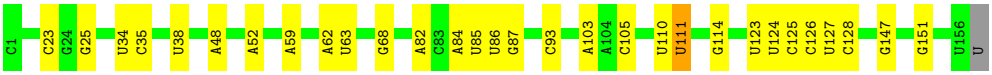
• Molecule 2: 5S rRNA

Chain L7:



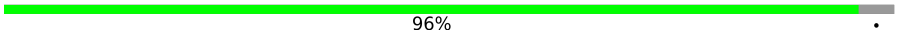
• Molecule 3: 5.8S rRNA

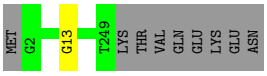
Chain L8:



• Molecule 4: 60S ribosomal protein L8

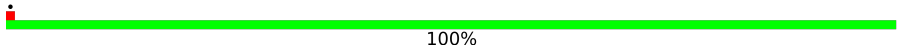
Chain LA:

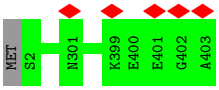




• Molecule 5: 60S ribosomal protein L3

Chain LB:



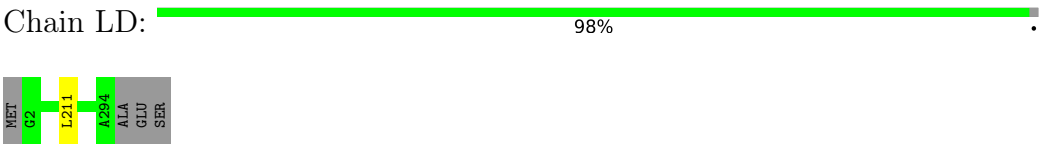


• Molecule 6: 60S ribosomal protein L4

Chain LC:

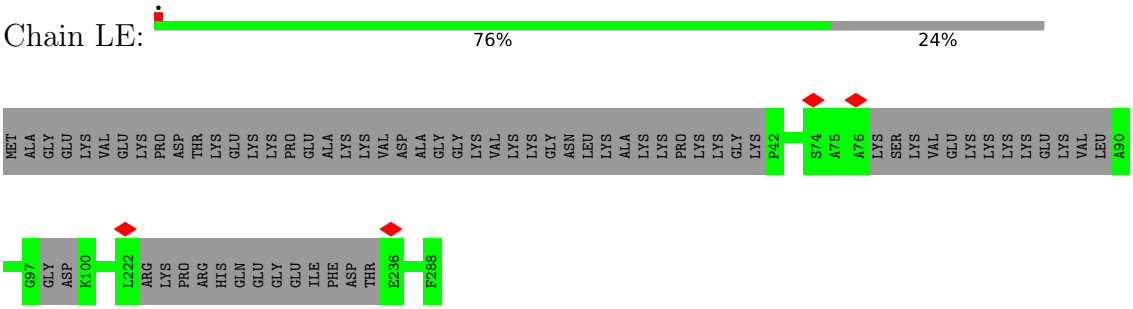
• Molecule 7: 60S ribosomal protein L5

Chain LD:



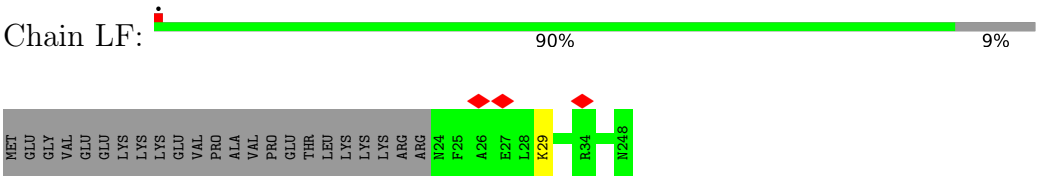
• Molecule 8: 60S ribosomal protein L6

Chain LE:



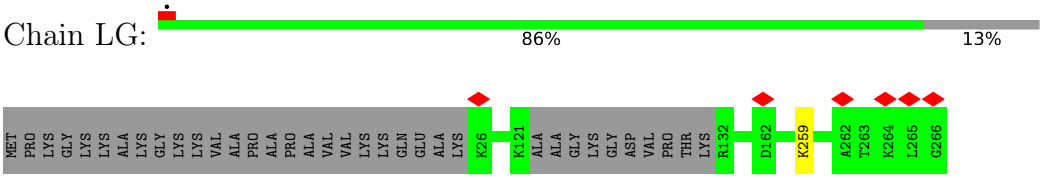
• Molecule 9: 60S ribosomal protein L7

Chain LF:



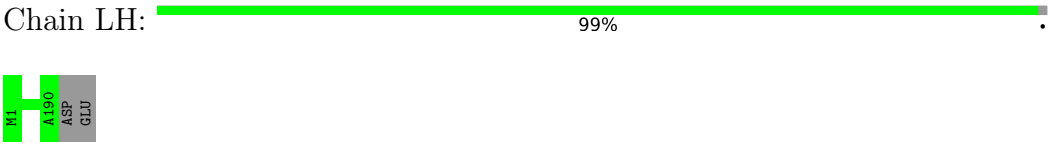
• Molecule 10: 60S ribosomal protein L7a

Chain LG:



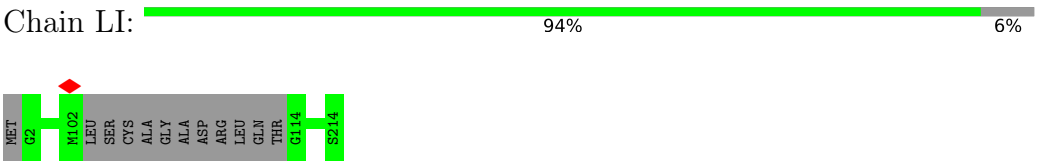
• Molecule 11: 60S ribosomal protein L9

Chain LH:



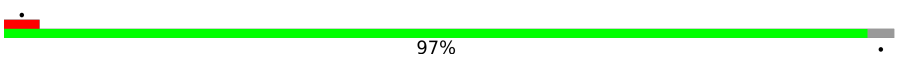
• Molecule 12: 60S ribosomal protein L10-like

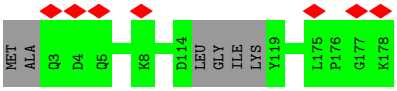
Chain LI:



• Molecule 13: 60S ribosomal protein L11

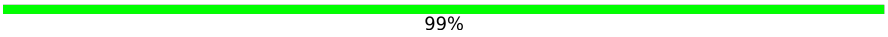
Chain LJ:

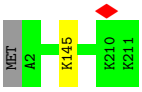




• Molecule 14: 60S ribosomal protein L13

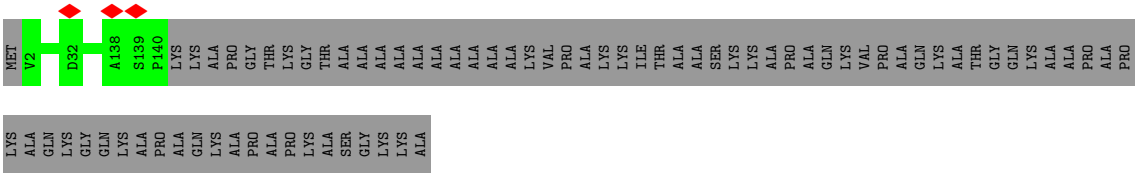
Chain LL:





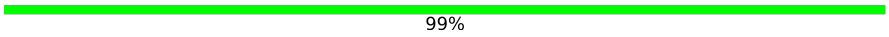
• Molecule 15: 60S ribosomal protein L14

Chain LM:



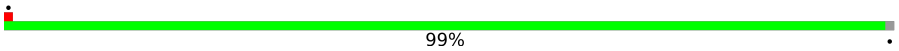
• Molecule 16: 60S ribosomal protein L15

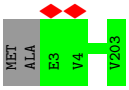
Chain LN:



• Molecule 17: 60S ribosomal protein L13a

Chain LO:



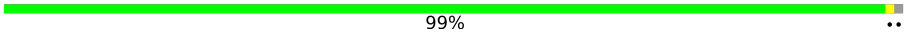


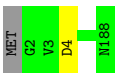
• Molecule 18: 60S ribosomal protein L17

Chain LP:

• Molecule 19: 60S ribosomal protein L18

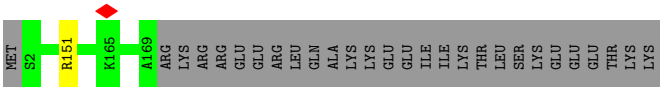
Chain LQ:





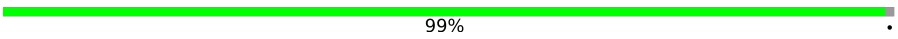
• Molecule 20: 60S ribosomal protein L19

Chain LR:



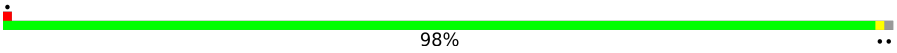
• Molecule 21: 60S ribosomal protein L18a

Chain LS:



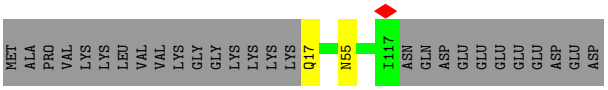
• Molecule 22: 60S ribosomal protein L21

Chain LT:



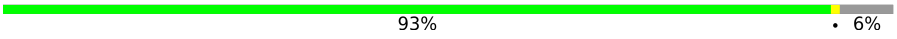
• Molecule 23: 60S ribosomal protein L22

Chain LU:



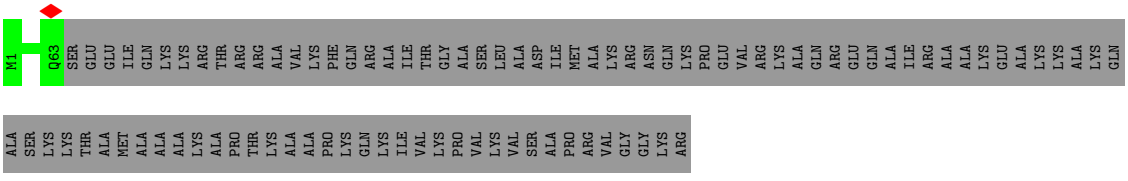
• Molecule 24: 60S ribosomal protein L23

Chain LV:



• Molecule 25: 60S ribosomal protein L24

Chain LW:



• Molecule 26: 60S ribosomal protein L23a

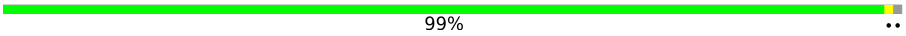
Chain LX:

• Molecule 27: 60S ribosomal protein L26

Chain LY:

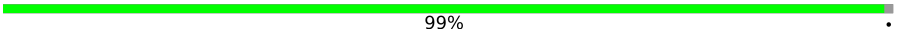
• Molecule 28: 60S ribosomal protein L27

Chain LZ:



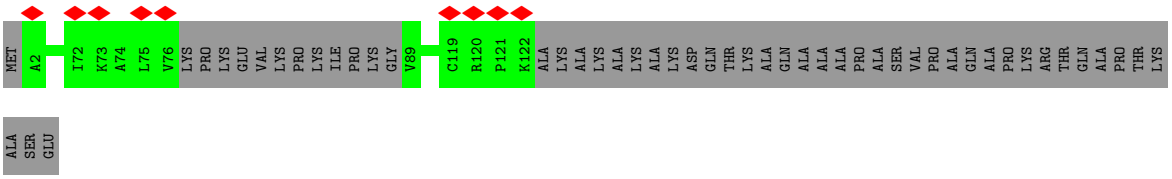
• Molecule 29: 60S ribosomal protein L27a

Chain La:



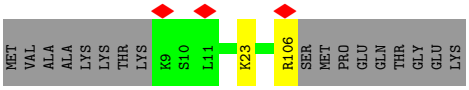
• Molecule 30: 60S ribosomal protein L29

Chain Lb:



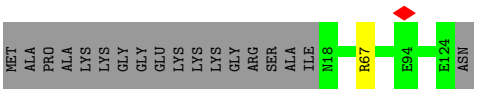
• Molecule 31: 60S ribosomal protein L30

Chain Lc:



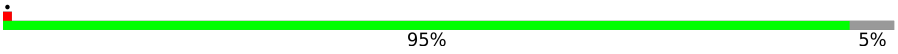
• Molecule 32: 60S ribosomal protein L31

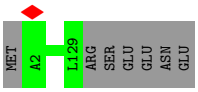
Chain Ld:



• Molecule 33: 60S ribosomal protein L32

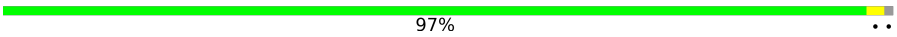
Chain Le:

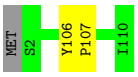




• Molecule 34: 60S ribosomal protein L35a

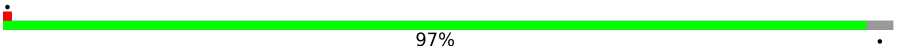
Chain Lf:

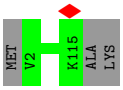




• Molecule 35: 60S ribosomal protein L34

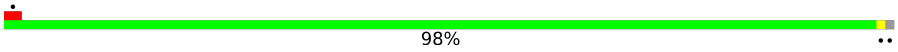
Chain Lg:

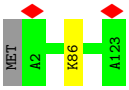




• Molecule 36: 60S ribosomal protein L35

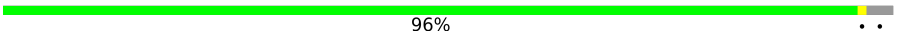
Chain Lh:

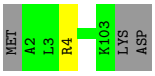




• Molecule 37: 60S ribosomal protein L36

Chain Li:



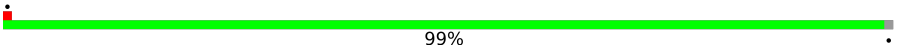


• Molecule 38: 60S ribosomal protein L37

Chain Lj:

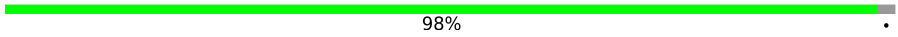
• Molecule 39: 60S ribosomal protein L38

Chain Lk:



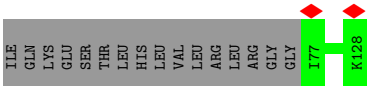
• Molecule 40: 60S ribosomal protein L39

Chain Ll:



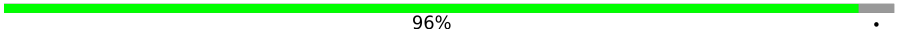
• Molecule 41: Ubiquitin-60S ribosomal protein L40

Chain Lm:



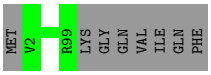
• Molecule 42: 60S ribosomal protein L41

Chain Ln:



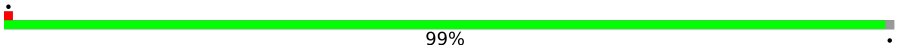
• Molecule 43: 60S ribosomal protein L36a

Chain Lo:



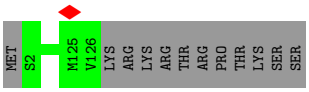
• Molecule 44: 60S ribosomal protein L37a

Chain Lp:



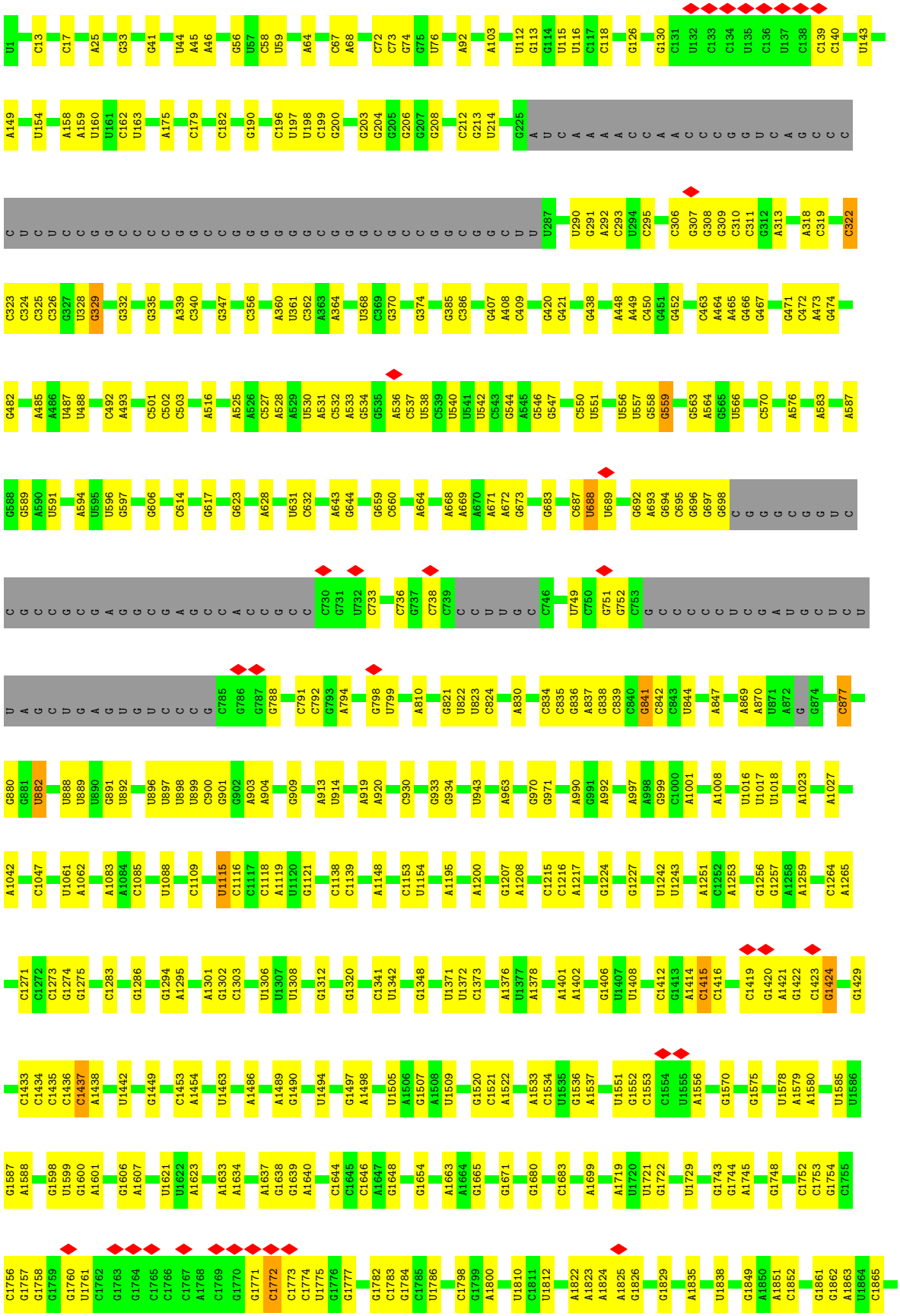
• Molecule 45: 60S ribosomal protein L28

Chain Lr:



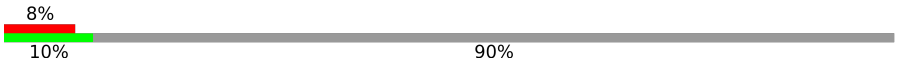
• Molecule 46: 18S rRNA

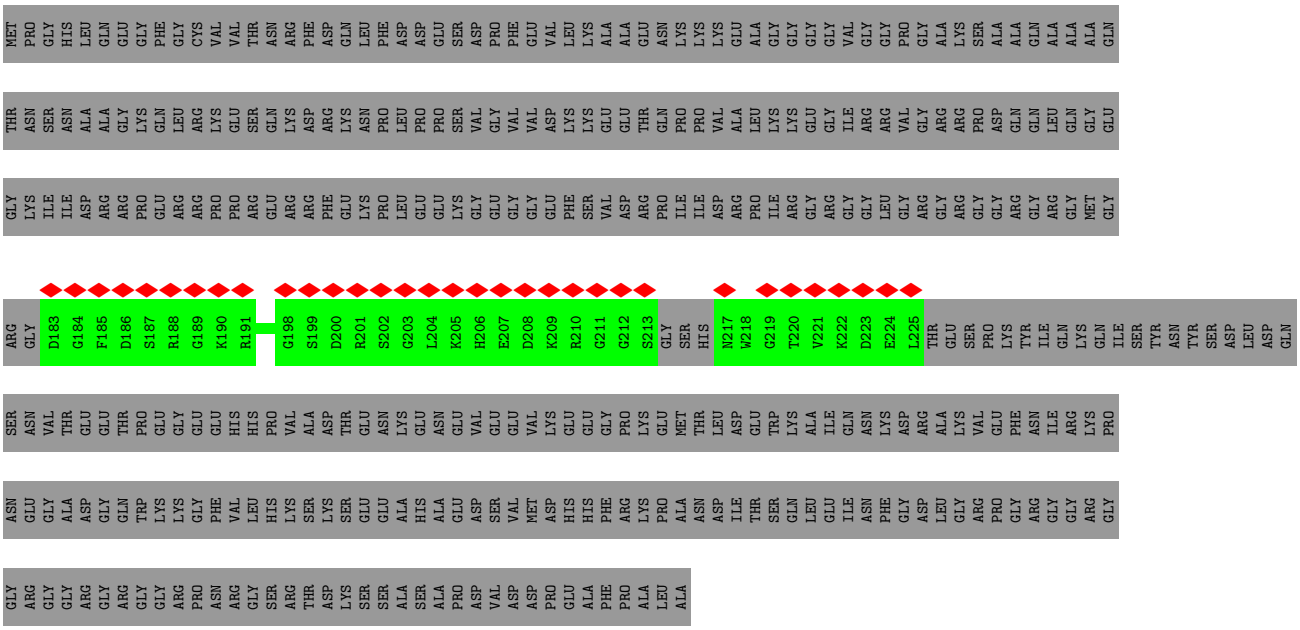
Chain S2:



• Molecule 47: Isoform 2 of SERPINE1 mRNA-binding protein 1

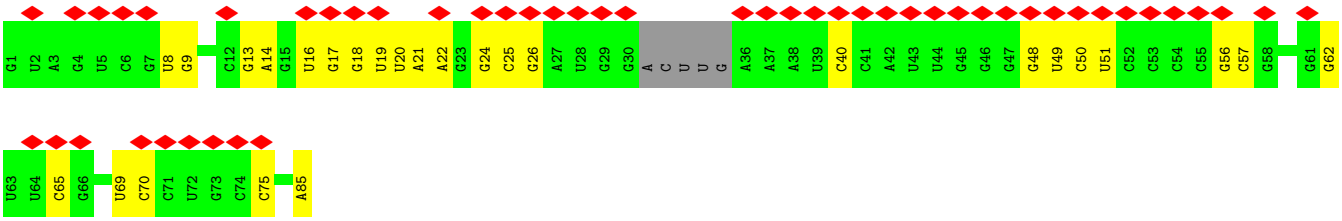
Chain S:





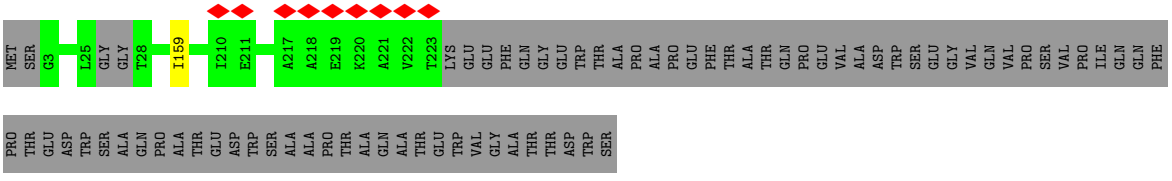
• Molecule 48: EtRNA

Chain E:



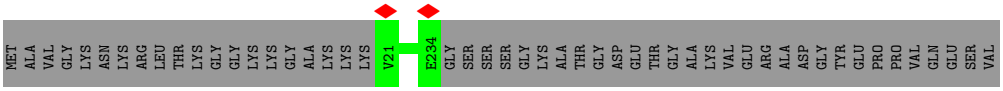
• Molecule 49: 40S ribosomal protein SA

Chain SA:



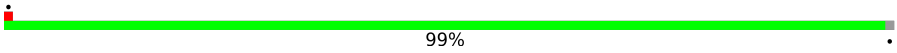
• Molecule 50: 40S ribosomal protein S3a

Chain SB:



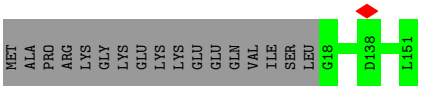
• Molecule 51: 40S ribosomal protein S13

Chain SN:



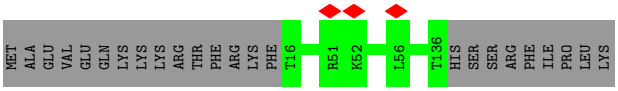
• Molecule 52: 40S ribosomal protein S14

Chain SO:



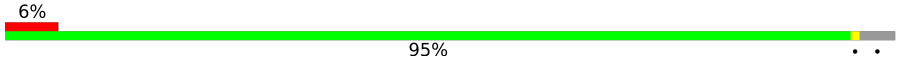
• Molecule 53: 40S ribosomal protein S15

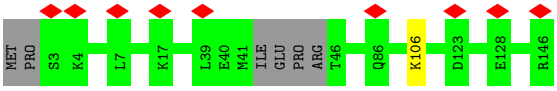
Chain SP:



• Molecule 54: 40S ribosomal protein S16

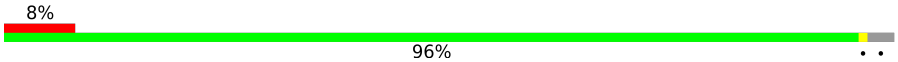
Chain SQ:

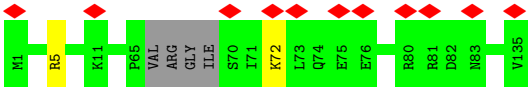




• Molecule 55: 40S ribosomal protein S17

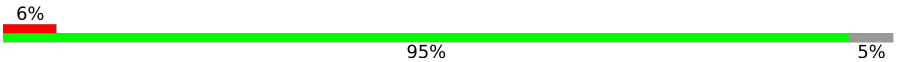
Chain SR:

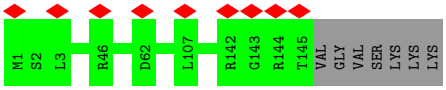




• Molecule 56: 40S ribosomal protein S18

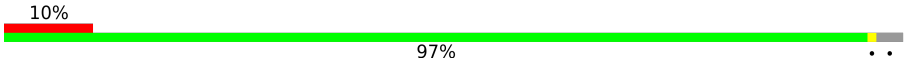
Chain SS:

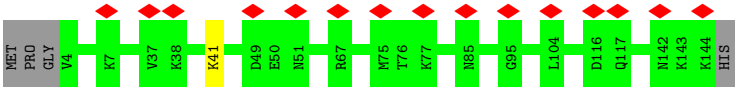




• Molecule 57: 40S ribosomal protein S19

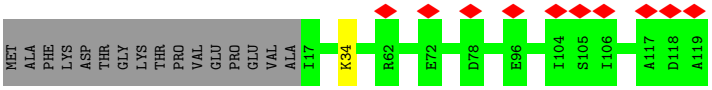
Chain ST:





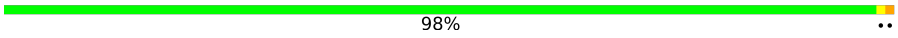
• Molecule 58: 40S ribosomal protein S20

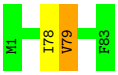
Chain SU:



• Molecule 59: 40S ribosomal protein S21

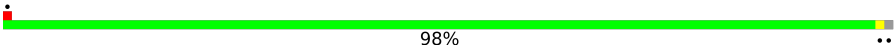
Chain SV:

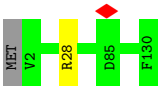




• Molecule 60: 40S ribosomal protein S15a

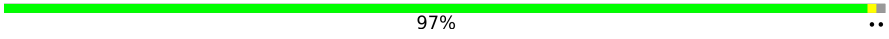
Chain SW:





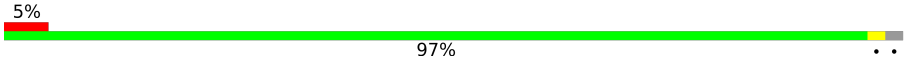
• Molecule 61: 40S ribosomal protein S23

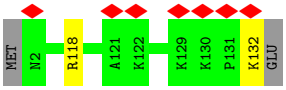
Chain SX:



• Molecule 62: 40S ribosomal protein S24

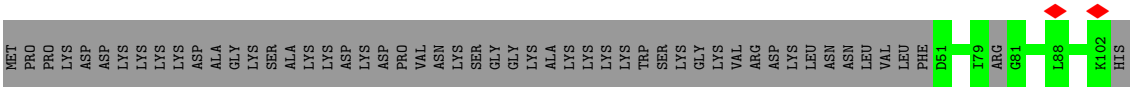
Chain SY:

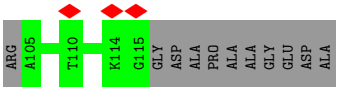




• Molecule 63: 40S ribosomal protein S25

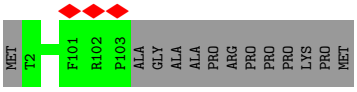
Chain SZ:





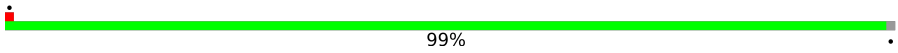
• Molecule 64: 40S ribosomal protein S26

Chain Sa:



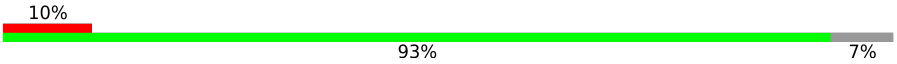
• Molecule 65: 40S ribosomal protein S27

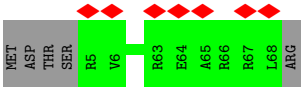
Chain Sb:



• Molecule 66: 40S ribosomal protein S28

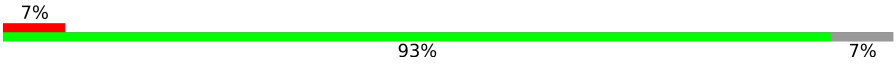
Chain Sc:

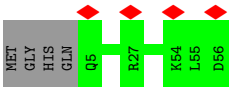




• Molecule 67: 40S ribosomal protein S29

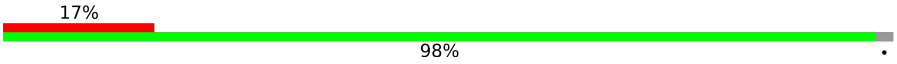
Chain Sd:

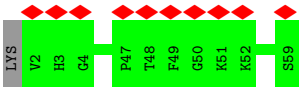




• Molecule 68: 40S ribosomal protein S30

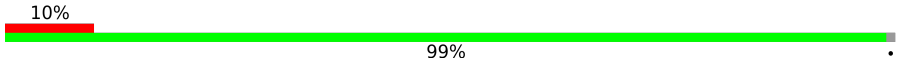
Chain Se:

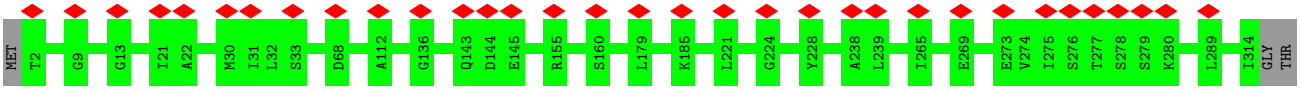




• Molecule 69: Receptor of activated protein C kinase 1

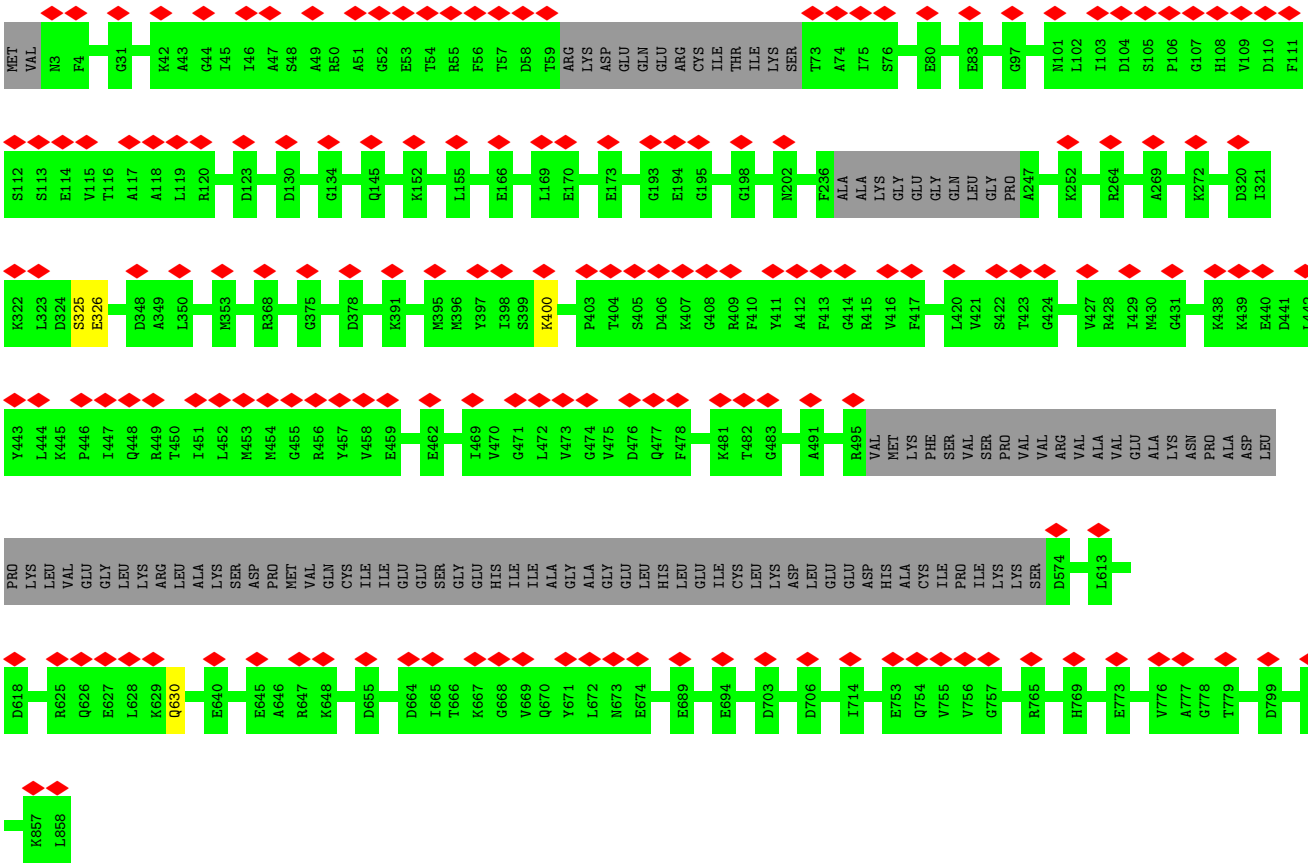
Chain Sg:





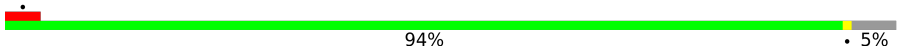
• Molecule 70: Elongation factor 2

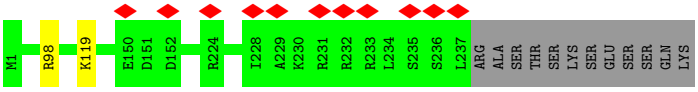
Chain CB:



• Molecule 71: 40S ribosomal protein S6

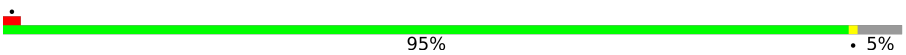
Chain SG:

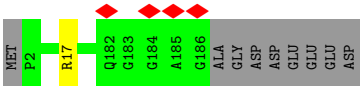




• Molecule 72: 40S ribosomal protein S9

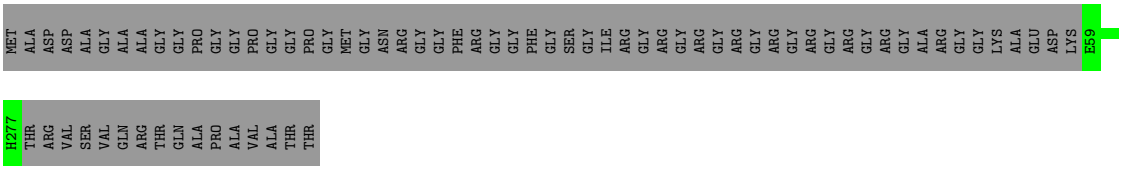
Chain SJ:



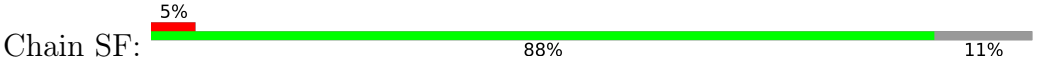


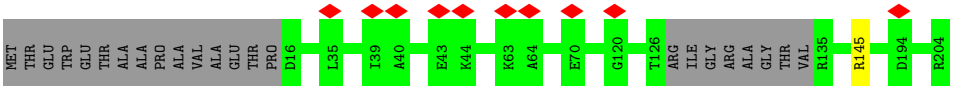
• Molecule 73: 40S ribosomal protein S2

Chain SC:

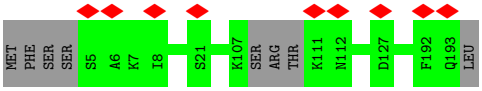


• Molecule 74: 40S ribosomal protein S5

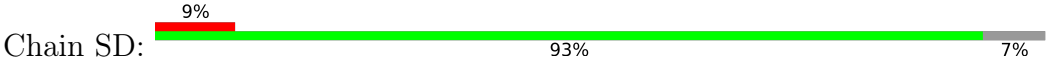


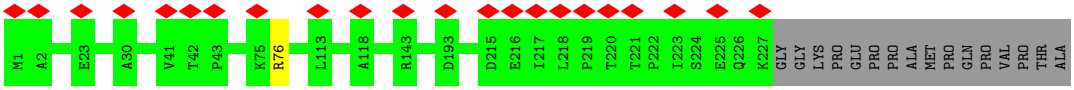


• Molecule 75: 40S ribosomal protein S7

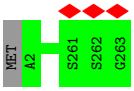


• Molecule 76: 40S ribosomal protein S3

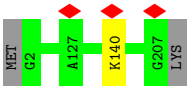




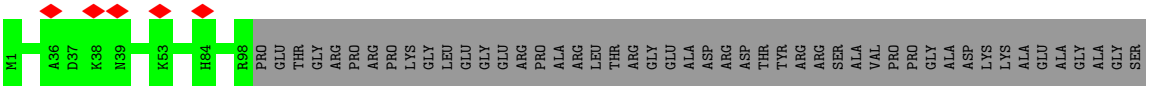
• Molecule 77: 40S ribosomal protein S4, X isoform



• Molecule 78: 40S ribosomal protein S8

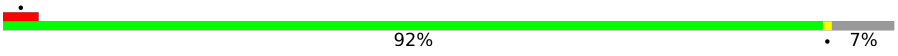


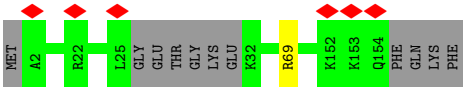
• Molecule 79: 40S ribosomal protein S10



• Molecule 80: 40S ribosomal protein S11

Chain SL:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	85947	Depositor
Resolution determination method	FSC 0.33 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.063	Depositor
Minimum map value	-0.036	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.005	Depositor
Map size (Å)	483.84003, 483.84003, 483.84003	wwPDB
Map dimensions	448, 448, 448	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.08, 1.08, 1.08	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	L5	0.73	0/87719	0.88	122/136834 (0.1%)
2	L7	0.75	0/2861	0.78	0/4459
3	L8	0.72	0/3701	0.80	1/5766 (0.0%)
4	LA	0.46	0/1936	0.55	0/2596
5	LB	0.43	0/3306	0.54	0/4424
6	LC	0.42	0/2962	0.54	0/3977
7	LD	0.42	0/2428	0.50	1/3252 (0.0%)
8	LE	0.38	0/1797	0.53	0/2408
9	LF	0.45	0/1905	0.51	0/2539
10	LG	0.38	0/1898	0.50	0/2552
11	LH	0.41	0/1537	0.54	0/2066
12	LI	0.41	0/1673	0.53	0/2233
13	LJ	0.37	0/1403	0.57	0/1874
14	LL	0.39	0/1732	0.50	0/2315
15	LM	0.42	0/1161	0.52	0/1554
16	LN	0.45	0/1746	0.51	0/2338
17	LO	0.43	0/1682	0.49	0/2250
18	LP	0.42	0/1268	0.50	0/1701
19	LQ	0.44	0/1537	0.56	1/2052 (0.0%)
20	LR	0.38	0/1413	0.50	0/1870
21	LS	0.46	0/1493	0.51	0/2003
22	LT	0.44	0/1326	0.50	0/1770
23	LU	0.38	0/839	0.58	0/1126
24	LV	0.41	0/993	0.51	0/1332
25	LW	0.43	0/541	0.47	0/720
26	LX	0.42	0/975	0.51	0/1312
27	LY	0.43	0/1132	0.49	0/1504
28	LZ	0.42	0/1130	0.54	1/1507 (0.1%)
29	La	0.43	0/1191	0.51	0/1591
30	Lb	0.34	0/889	0.50	0/1175
31	Lc	0.44	0/774	0.55	0/1038
32	Ld	0.44	0/903	0.54	0/1216

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	Le	0.44	0/1071	0.52	0/1429
34	Lf	0.44	0/895	0.56	0/1198
35	Lg	0.43	0/916	0.51	0/1220
36	Lh	0.38	0/1023	0.47	0/1351
37	Li	0.36	0/843	0.47	0/1115
38	Lj	0.43	0/720	0.56	0/952
39	Lk	0.37	0/575	0.54	0/761
40	Ll	0.37	0/454	0.50	0/599
41	Lm	0.40	0/435	0.49	0/575
42	Ln	0.34	0/231	0.41	0/294
43	Lo	0.43	0/818	0.52	0/1079
44	Lp	0.43	0/718	0.48	0/953
45	Lr	0.42	0/1017	0.50	0/1364
46	S2	0.55	0/41217	0.85	52/64218 (0.1%)
47	S	0.25	0/322	0.44	0/423
48	E	0.27	0/1907	0.85	2/2969 (0.1%)
49	SA	0.35	0/1769	0.56	1/2403 (0.0%)
50	SB	0.35	0/1765	0.54	0/2362
51	SN	0.36	0/1232	0.46	0/1656
52	SO	0.34	0/1015	0.54	0/1361
53	SP	0.30	0/1003	0.55	0/1342
54	SQ	0.30	0/1123	0.54	0/1501
55	SR	0.31	0/1074	0.56	0/1441
56	SS	0.29	0/1216	0.54	0/1628
57	ST	0.28	0/1119	0.49	0/1499
58	SU	0.30	0/827	0.56	0/1110
59	SV	0.34	0/643	0.55	0/860
60	SW	0.37	0/1051	0.51	0/1406
61	SX	0.38	0/1116	0.53	0/1490
62	SY	0.34	0/1083	0.54	0/1438
63	SZ	0.28	0/482	0.54	0/644
64	Sa	0.38	0/836	0.52	0/1121
65	Sb	0.35	0/665	0.57	0/891
66	Sc	0.30	0/508	0.58	0/680
67	Sd	0.31	0/446	0.47	0/591
68	Se	0.30	0/465	0.50	0/612
69	Sg	0.28	0/2493	0.58	0/3394
70	CB	0.29	0/6022	0.51	0/8133
71	SG	0.30	0/1946	0.50	0/2590
72	SJ	0.34	0/1550	0.49	0/2069
73	SC	0.39	0/1737	0.56	0/2347
74	SF	0.31	0/1458	0.52	0/1958
75	SH	0.34	0/1519	0.56	0/2033

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	SD	0.31	0/1793	0.54	0/2414
77	SE	0.34	0/2118	0.54	0/2849
78	SI	0.36	0/1715	0.54	0/2287
79	SK	0.30	0/851	0.55	0/1147
80	SL	0.38	0/1225	0.50	0/1638
All	All	0.57	0/234878	0.76	181/344749 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
4	LA	0	1
34	Lf	0	1
36	Lh	0	1
59	SV	0	2
All	All	0	5

There are no bond length outliers.

All (181) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L5	4923	C	N3-C2-O2	-11.23	114.04	121.90
1	L5	3773	U	N3-C2-O2	-10.56	114.80	122.20
1	L5	655	C	N3-C2-O2	-10.35	114.65	121.90
1	L5	485	C	C2-N1-C1'	9.99	129.79	118.80
46	S2	1772	C	N3-C2-O2	-9.92	114.95	121.90
46	S2	1772	C	N1-C2-O2	9.82	124.79	118.90
46	S2	322	C	N3-C2-O2	-9.58	115.19	121.90
1	L5	129	C	N3-C2-O2	-9.21	115.45	121.90
1	L5	174	C	N3-C2-O2	-9.15	115.50	121.90
1	L5	456	C	N3-C2-O2	-9.09	115.54	121.90
1	L5	499	G	O4'-C1'-N9	8.91	115.33	108.20
1	L5	1447	C	N3-C2-O2	-8.51	115.94	121.90
46	S2	293	C	N1-C2-O2	8.37	123.92	118.90
1	L5	456	C	O4'-C1'-N1	8.27	114.82	108.20
1	L5	4923	C	N1-C2-O2	8.18	123.81	118.90
1	L5	1173	G	N3-C4-N9	-8.15	121.11	126.00
1	L5	985	C	C2-N1-C1'	8.10	127.71	118.80
46	S2	322	C	N1-C2-O2	8.03	123.72	118.90
1	L5	654	C	C2-N1-C1'	7.88	127.47	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L5	4924	C	N3-C2-O2	-7.86	116.40	121.90
19	LQ	4	ASP	CB-CG-OD1	7.85	125.37	118.30
1	L5	485	C	C6-N1-C1'	-7.84	111.39	120.80
1	L5	906	C	N3-C2-O2	-7.78	116.45	121.90
1	L5	985	C	N1-C2-O2	7.75	123.55	118.90
1	L5	3773	U	N1-C2-O2	7.74	128.22	122.80
1	L5	654	C	N1-C2-O2	7.72	123.53	118.90
1	L5	925	C	N1-C2-O2	7.62	123.47	118.90
46	S2	293	C	C2-N1-C1'	7.62	127.18	118.80
1	L5	1252	C	N3-C2-O2	-7.58	116.59	121.90
1	L5	1077	C	N3-C2-O2	-7.45	116.69	121.90
46	S2	534	G	C5-C6-O6	7.34	133.00	128.60
46	S2	534	G	N1-C6-O6	-7.29	115.53	119.90
1	L5	4772	C	N3-C2-O2	-7.26	116.82	121.90
46	S2	1416	C	N3-C2-O2	-7.26	116.82	121.90
1	L5	2710	C	C2-N1-C1'	7.18	126.70	118.80
1	L5	4138	C	N3-C2-O2	-7.16	116.89	121.90
1	L5	2710	C	N1-C2-O2	7.10	123.16	118.90
1	L5	654	C	C6-N1-C1'	-6.99	112.41	120.80
46	S2	844	U	C2-N3-C4	-6.96	122.82	127.00
46	S2	356	C	C2-N1-C1'	6.95	126.45	118.80
46	S2	844	U	N1-C2-N3	6.95	119.07	114.90
1	L5	986	C	N3-C2-O2	-6.91	117.06	121.90
46	S2	877	C	N3-C2-O2	-6.87	117.09	121.90
1	L5	130	C	N3-C2-O2	-6.80	117.14	121.90
1	L5	490	C	N3-C2-O2	-6.79	117.14	121.90
1	L5	1082	C	O4'-C1'-N1	6.77	113.61	108.20
1	L5	986	C	C6-N1-C2	-6.76	117.59	120.30
46	S2	1453	C	C2-N1-C1'	6.75	126.23	118.80
46	S2	1273	C	C6-N1-C2	-6.75	117.60	120.30
46	S2	1437	C	C2-N1-C1'	6.74	126.21	118.80
1	L5	4924	C	C6-N1-C1'	6.67	128.80	120.80
1	L5	925	C	N3-C2-O2	-6.63	117.26	121.90
1	L5	4709	U	C2-N1-C1'	6.61	125.63	117.70
46	S2	501	C	C2-N1-C1'	6.57	126.02	118.80
1	L5	1082	C	N3-C2-O2	-6.56	117.31	121.90
1	L5	3756	A	N9-C4-C5	-6.56	103.18	105.80
1	L5	4924	C	C6-N1-C2	-6.55	117.68	120.30
1	L5	4924	C	N1-C2-N3	6.53	123.77	119.20
1	L5	1447	C	C6-N1-C2	-6.50	117.70	120.30
1	L5	1414	C	N3-C2-O2	-6.50	117.35	121.90
1	L5	175	C	N3-C2-O2	-6.42	117.41	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L5	456	C	C6-N1-C2	-6.41	117.73	120.30
1	L5	485	C	N1-C2-O2	6.40	122.74	118.90
46	S2	527	C	N3-C2-O2	-6.38	117.43	121.90
1	L5	2410	C	C2-N1-C1'	6.37	125.80	118.80
46	S2	1273	C	N3-C2-O2	-6.30	117.49	121.90
1	L5	1191	C	N3-C2-O2	-6.30	117.49	121.90
1	L5	263	G	C5-C6-O6	6.29	132.37	128.60
48	E	65	C	N3-C2-O2	-6.14	117.61	121.90
46	S2	1016	U	C2-N1-C1'	6.13	125.05	117.70
48	E	65	C	N1-C2-O2	6.12	122.57	118.90
46	S2	1453	C	N1-C2-O2	6.10	122.56	118.90
46	S2	1416	C	C6-N1-C2	-6.06	117.88	120.30
1	L5	985	C	C6-N1-C1'	-6.01	113.59	120.80
1	L5	2710	C	N3-C2-O2	-5.97	117.72	121.90
46	S2	1437	C	N1-C2-O2	5.95	122.47	118.90
1	L5	4928	C	C2-N1-C1'	5.95	125.34	118.80
1	L5	489	C	N1-C2-O2	5.91	122.44	118.90
1	L5	4709	U	C5-C4-O4	-5.89	122.36	125.90
1	L5	1715	C	N1-C2-O2	5.85	122.41	118.90
46	S2	1772	C	C2-N1-C1'	5.85	125.23	118.80
1	L5	4924	C	C5-C4-N4	5.84	124.29	120.20
46	S2	1415	C	N1-C2-O2	5.84	122.40	118.90
3	L8	111	U	C2-N1-C1'	5.82	124.69	117.70
46	S2	632	C	C2-N1-C1'	5.82	125.20	118.80
46	S2	293	C	N3-C2-O2	-5.80	117.84	121.90
46	S2	1424	G	N3-C4-N9	5.78	129.47	126.00
1	L5	3773	U	C2-N1-C1'	5.75	124.60	117.70
1	L5	1077	C	C6-N1-C2	-5.75	118.00	120.30
1	L5	1173	G	N3-C4-C5	5.74	131.47	128.60
46	S2	501	C	N1-C2-O2	5.74	122.34	118.90
1	L5	456	C	N1-C2-O2	5.73	122.34	118.90
1	L5	4897	G	N1-C6-O6	-5.73	116.46	119.90
46	S2	1772	C	C6-N1-C2	-5.73	118.01	120.30
1	L5	655	C	N1-C2-O2	5.72	122.33	118.90
1	L5	489	C	C2-N1-C1'	5.70	125.07	118.80
1	L5	1417	C	C2-N1-C1'	5.70	125.07	118.80
46	S2	1520	G	N3-C4-N9	5.69	129.42	126.00
1	L5	4147	G	C5-C6-O6	5.68	132.01	128.60
1	L5	2627	C	C2-N1-C1'	5.67	125.03	118.80
49	SA	159	ILE	CG1-CB-CG2	-5.65	98.97	111.40
1	L5	140	G	C5-C6-O6	5.64	131.99	128.60
1	L5	1173	G	C4-N9-C1'	-5.63	119.18	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L5	3761	C	C2-N1-C1'	5.63	124.99	118.80
46	S2	550	C	C6-N1-C1'	5.62	127.54	120.80
1	L5	1173	G	C8-N9-C1'	5.57	134.23	127.00
1	L5	135	G	C4-C5-N7	-5.55	108.58	110.80
1	L5	4771	C	N1-C2-O2	5.55	122.23	118.90
46	S2	1520	G	C4-N9-C1'	5.55	133.71	126.50
46	S2	1415	C	C2-N1-C1'	5.54	124.89	118.80
1	L5	140	G	N1-C6-O6	-5.52	116.59	119.90
1	L5	4742	G	N3-C4-N9	-5.52	122.69	126.00
28	LZ	88	ASP	CB-CG-OD2	5.50	123.25	118.30
1	L5	2627	C	N1-C2-O2	5.49	122.19	118.90
46	S2	293	C	C6-N1-C1'	-5.49	114.21	120.80
1	L5	1755	C	C2-N1-C1'	5.48	124.83	118.80
46	S2	1273	C	C5-C4-N4	5.45	124.02	120.20
1	L5	914	U	C5-C4-O4	-5.42	122.65	125.90
1	L5	4923	C	C6-N1-C2	-5.42	118.13	120.30
1	L5	4897	G	C5-C6-O6	5.41	131.85	128.60
1	L5	655	C	N1-C2-N3	5.40	122.98	119.20
1	L5	4093	G	O4'-C1'-N9	5.40	112.52	108.20
1	L5	2675	G	P-O3'-C3'	5.40	126.18	119.70
1	L5	4557	U	C2-N1-C1'	5.38	124.16	117.70
1	L5	3754	G	C8-N9-C4	-5.38	104.25	106.40
1	L5	2257	C	C2-N1-C1'	5.37	124.71	118.80
1	L5	4772	C	C6-N1-C2	-5.36	118.16	120.30
46	S2	1016	U	N1-C2-O2	5.35	126.55	122.80
46	S2	559	G	O4'-C1'-N9	5.35	112.48	108.20
46	S2	909	G	N3-C4-N9	5.34	129.21	126.00
1	L5	135	G	C5-C6-N1	-5.34	108.83	111.50
1	L5	1715	C	C2-N1-C1'	5.33	124.66	118.80
1	L5	1414	C	N1-C2-O2	5.31	122.08	118.90
1	L5	4928	C	N1-C2-O2	5.30	122.08	118.90
1	L5	3773	U	C6-N1-C2	-5.30	117.82	121.00
46	S2	329	G	N1-C2-N2	-5.28	111.44	116.20
1	L5	263	G	N3-C4-N9	-5.27	122.84	126.00
46	S2	550	C	C2-N1-C1'	-5.27	113.01	118.80
1	L5	985	C	C5-C6-N1	5.26	123.63	121.00
1	L5	4709	U	C6-N1-C1'	-5.26	113.83	121.20
1	L5	1367	C	N1-C2-O2	5.26	122.06	118.90
1	L5	4774	C	C2-N1-C1'	-5.25	113.02	118.80
46	S2	1115	U	N1-C2-O2	5.24	126.47	122.80
46	S2	1115	U	C2-N1-C1'	5.24	123.98	117.70
46	S2	882	U	C2-N1-C1'	5.20	123.94	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	S2	1520	G	C8-N9-C1'	-5.17	120.29	127.00
1	L5	129	C	C6-N1-C2	-5.16	118.24	120.30
1	L5	129	C	N1-C2-N3	5.16	122.81	119.20
1	L5	2018	C	C5-C6-N1	5.15	123.58	121.00
1	L5	100	C	C2-N1-C1'	5.15	124.46	118.80
1	L5	2710	C	C6-N1-C1'	-5.15	114.62	120.80
46	S2	118	C	C2-N1-C1'	5.14	124.46	118.80
1	L5	4774	C	N1-C2-O2	-5.14	115.82	118.90
1	L5	485	C	C5-C6-N1	5.13	123.57	121.00
46	S2	688	U	P-O3'-C3'	5.13	125.86	119.70
46	S2	841	G	N1-C2-N2	-5.13	111.59	116.20
1	L5	663	G	N3-C4-N9	5.12	129.07	126.00
1	L5	1438	U	O4'-C1'-N1	5.11	112.29	108.20
1	L5	655	C	C6-N1-C2	-5.11	118.26	120.30
1	L5	2410	C	C6-N1-C1'	-5.11	114.67	120.80
1	L5	174	C	N1-C2-O2	5.10	121.96	118.90
1	L5	4694	G	C4-N9-C1'	5.10	133.13	126.50
1	L5	739	G	N3-C4-N9	5.09	129.06	126.00
1	L5	655	C	C6-N1-C1'	5.08	126.90	120.80
1	L5	263	G	N1-C6-O6	-5.08	116.85	119.90
1	L5	655	C	C5-C4-N4	5.08	123.75	120.20
1	L5	1216	C	C2-N1-C1'	5.08	124.38	118.80
1	L5	181	C	N1-C2-O2	5.07	121.94	118.90
1	L5	4862	G	N3-C4-N9	5.07	129.04	126.00
1	L5	1367	C	C2-N1-C1'	5.07	124.38	118.80
1	L5	4926	C	C2-N1-C1'	5.07	124.37	118.80
7	LD	211	LEU	CA-CB-CG	5.05	126.92	115.30
46	S2	1271	C	N1-C2-O2	5.04	121.93	118.90
1	L5	1405	C	N1-C2-O2	5.04	121.92	118.90
1	L5	4775	C	N1-C2-O2	5.04	121.92	118.90
1	L5	1173	G	N9-C4-C5	5.04	107.41	105.40
46	S2	1437	C	N3-C2-O2	-5.03	118.38	121.90
46	S2	356	C	C6-N1-C1'	-5.01	114.78	120.80
1	L5	417	G	O4'-C1'-N9	5.01	112.21	108.20
46	S2	877	C	C6-N1-C2	-5.00	118.30	120.30
1	L5	739	G	C8-N9-C1'	-5.00	120.50	127.00

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	LA	13	GLY	Peptide

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Mol	Chain	Res	Type	Group
34	Lf	106	TYR	Peptide
36	Lh	86	LYS	Peptide
59	SV	78	ILE	Peptide
59	SV	79	VAL	Peptide

5.2 Too-close contacts (i)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	LA	246/257 (96%)	225 (92%)	21 (8%)	0	100	100
5	LB	400/403 (99%)	373 (93%)	27 (7%)	0	100	100
6	LC	363/427 (85%)	330 (91%)	33 (9%)	0	100	100
7	LD	291/297 (98%)	269 (92%)	22 (8%)	0	100	100
8	LE	211/288 (73%)	193 (92%)	18 (8%)	0	100	100
9	LF	223/248 (90%)	213 (96%)	10 (4%)	0	100	100
10	LG	227/266 (85%)	214 (94%)	13 (6%)	0	100	100
11	LH	188/192 (98%)	169 (90%)	19 (10%)	0	100	100
12	LI	198/214 (92%)	184 (93%)	14 (7%)	0	100	100
13	LJ	168/178 (94%)	153 (91%)	15 (9%)	0	100	100
14	LL	208/211 (99%)	191 (92%)	17 (8%)	0	100	100
15	LM	137/215 (64%)	125 (91%)	12 (9%)	0	100	100
16	LN	201/204 (98%)	185 (92%)	15 (8%)	1 (0%)	29	61
17	LO	199/203 (98%)	191 (96%)	8 (4%)	0	100	100
18	LP	151/184 (82%)	142 (94%)	9 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	LQ	185/188 (98%)	177 (96%)	8 (4%)	0	100	100
20	LR	166/196 (85%)	158 (95%)	8 (5%)	0	100	100
21	LS	173/176 (98%)	158 (91%)	15 (9%)	0	100	100
22	LT	157/160 (98%)	150 (96%)	7 (4%)	0	100	100
23	LU	99/128 (77%)	81 (82%)	17 (17%)	1 (1%)	15	46
24	LV	129/140 (92%)	121 (94%)	8 (6%)	0	100	100
25	LW	61/157 (39%)	57 (93%)	4 (7%)	0	100	100
26	LX	115/156 (74%)	112 (97%)	3 (3%)	0	100	100
27	LY	132/145 (91%)	121 (92%)	11 (8%)	0	100	100
28	LZ	133/136 (98%)	122 (92%)	11 (8%)	0	100	100
29	La	145/148 (98%)	137 (94%)	8 (6%)	0	100	100
30	Lb	105/159 (66%)	98 (93%)	7 (7%)	0	100	100
31	Lc	96/115 (84%)	88 (92%)	8 (8%)	0	100	100
32	Ld	105/125 (84%)	98 (93%)	7 (7%)	0	100	100
33	Le	126/135 (93%)	116 (92%)	10 (8%)	0	100	100
34	Lf	107/110 (97%)	97 (91%)	9 (8%)	1 (1%)	17	48
35	Lg	112/117 (96%)	108 (96%)	4 (4%)	0	100	100
36	Lh	120/123 (98%)	116 (97%)	4 (3%)	0	100	100
37	Li	100/105 (95%)	95 (95%)	5 (5%)	0	100	100
38	Lj	84/97 (87%)	78 (93%)	6 (7%)	0	100	100
39	Lk	67/70 (96%)	63 (94%)	4 (6%)	0	100	100
40	Ll	48/51 (94%)	46 (96%)	2 (4%)	0	100	100
41	Lm	50/128 (39%)	50 (100%)	0	0	100	100
42	Ln	22/25 (88%)	22 (100%)	0	0	100	100
43	Lo	96/106 (91%)	93 (97%)	3 (3%)	0	100	100
44	Lp	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
45	Lr	123/137 (90%)	114 (93%)	9 (7%)	0	100	100
47	S	36/402 (9%)	35 (97%)	1 (3%)	0	100	100
49	SA	215/295 (73%)	191 (89%)	24 (11%)	0	100	100
50	SB	212/264 (80%)	200 (94%)	12 (6%)	0	100	100
51	SN	148/151 (98%)	142 (96%)	6 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	SO	132/151 (87%)	120 (91%)	12 (9%)	0	100	100
53	SP	119/145 (82%)	105 (88%)	14 (12%)	0	100	100
54	SQ	136/146 (93%)	125 (92%)	11 (8%)	0	100	100
55	SR	127/135 (94%)	115 (91%)	12 (9%)	0	100	100
56	SS	143/152 (94%)	129 (90%)	14 (10%)	0	100	100
57	ST	139/145 (96%)	124 (89%)	14 (10%)	1 (1%)	22	54
58	SU	101/119 (85%)	92 (91%)	9 (9%)	0	100	100
59	SV	81/83 (98%)	71 (88%)	9 (11%)	1 (1%)	13	42
60	SW	127/130 (98%)	123 (97%)	4 (3%)	0	100	100
61	SX	139/143 (97%)	123 (88%)	14 (10%)	2 (1%)	11	38
62	SY	129/133 (97%)	117 (91%)	12 (9%)	0	100	100
63	SZ	56/125 (45%)	50 (89%)	6 (11%)	0	100	100
64	Sa	100/115 (87%)	87 (87%)	13 (13%)	0	100	100
65	Sb	81/84 (96%)	70 (86%)	11 (14%)	0	100	100
66	Sc	62/69 (90%)	48 (77%)	14 (23%)	0	100	100
67	Sd	50/56 (89%)	46 (92%)	4 (8%)	0	100	100
68	Se	56/59 (95%)	49 (88%)	7 (12%)	0	100	100
69	Sg	311/317 (98%)	270 (87%)	41 (13%)	0	100	100
70	CB	747/858 (87%)	693 (93%)	52 (7%)	2 (0%)	41	71
71	SG	235/249 (94%)	221 (94%)	14 (6%)	0	100	100
72	SJ	183/194 (94%)	168 (92%)	15 (8%)	0	100	100
73	SC	217/293 (74%)	203 (94%)	14 (6%)	0	100	100
74	SF	177/204 (87%)	161 (91%)	16 (9%)	0	100	100
75	SH	182/194 (94%)	151 (83%)	31 (17%)	0	100	100
76	SD	225/243 (93%)	199 (88%)	26 (12%)	0	100	100
77	SE	260/263 (99%)	244 (94%)	16 (6%)	0	100	100
78	SI	204/208 (98%)	195 (96%)	9 (4%)	0	100	100
79	SK	96/165 (58%)	79 (82%)	17 (18%)	0	100	100
80	SL	143/158 (90%)	133 (93%)	10 (7%)	0	100	100
All	All	11725/13660 (86%)	10797 (92%)	919 (8%)	9 (0%)	54	81

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
16	LN	124	ASP
23	LU	55	ASN
61	SX	87	ASN
59	SV	79	VAL
70	CB	326	GLU
57	ST	41	LYS
61	SX	86	PRO
34	Lf	107	PRO
70	CB	325	SER

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	LA	190/199 (96%)	190 (100%)	0	100	100
5	LB	348/349 (100%)	348 (100%)	0	100	100
6	LC	304/348 (87%)	302 (99%)	2 (1%)	84	90
7	LD	246/250 (98%)	246 (100%)	0	100	100
8	LE	194/252 (77%)	194 (100%)	0	100	100
9	LF	194/215 (90%)	193 (100%)	1 (0%)	88	93
10	LG	199/223 (89%)	198 (100%)	1 (0%)	88	93
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	172/181 (95%)	172 (100%)	0	100	100
13	LJ	145/149 (97%)	145 (100%)	0	100	100
14	LL	176/177 (99%)	175 (99%)	1 (1%)	86	91
15	LM	118/161 (73%)	118 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	173/174 (99%)	173 (100%)	0	100	100
18	LP	134/163 (82%)	134 (100%)	0	100	100
19	LQ	164/165 (99%)	164 (100%)	0	100	100
20	LR	148/175 (85%)	147 (99%)	1 (1%)	84	90

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	LS	156/157 (99%)	156 (100%)	0	100	100
22	LT	139/140 (99%)	137 (99%)	2 (1%)	67	82
23	LU	91/115 (79%)	90 (99%)	1 (1%)	73	85
24	LV	101/107 (94%)	100 (99%)	1 (1%)	76	86
25	LW	55/126 (44%)	55 (100%)	0	100	100
26	LX	105/133 (79%)	104 (99%)	1 (1%)	76	86
27	LY	124/135 (92%)	123 (99%)	1 (1%)	81	89
28	LZ	117/118 (99%)	117 (100%)	0	100	100
29	La	120/121 (99%)	120 (100%)	0	100	100
30	Lb	88/126 (70%)	88 (100%)	0	100	100
31	Lc	83/97 (86%)	81 (98%)	2 (2%)	49	73
32	Ld	98/110 (89%)	97 (99%)	1 (1%)	76	86
33	Le	114/121 (94%)	114 (100%)	0	100	100
34	Lf	88/89 (99%)	88 (100%)	0	100	100
35	Lg	98/100 (98%)	98 (100%)	0	100	100
36	Lh	109/110 (99%)	109 (100%)	0	100	100
37	Li	86/89 (97%)	85 (99%)	1 (1%)	71	83
38	Lj	73/80 (91%)	72 (99%)	1 (1%)	67	82
39	Lk	64/65 (98%)	64 (100%)	0	100	100
40	Ll	47/48 (98%)	47 (100%)	0	100	100
41	Lm	48/116 (41%)	48 (100%)	0	100	100
42	Ln	23/24 (96%)	23 (100%)	0	100	100
43	Lo	87/94 (93%)	87 (100%)	0	100	100
44	Lp	74/75 (99%)	74 (100%)	0	100	100
45	Lr	109/121 (90%)	109 (100%)	0	100	100
47	S	33/322 (10%)	33 (100%)	0	100	100
49	SA	183/243 (75%)	183 (100%)	0	100	100
50	SB	195/231 (84%)	195 (100%)	0	100	100
51	SN	130/131 (99%)	130 (100%)	0	100	100
52	SO	104/119 (87%)	104 (100%)	0	100	100
53	SP	107/130 (82%)	107 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
54	SQ	115/121 (95%)	114 (99%)	1 (1%)	78 87
55	SR	119/122 (98%)	117 (98%)	2 (2%)	60 78
56	SS	126/132 (96%)	126 (100%)	0	100 100
57	ST	112/115 (97%)	112 (100%)	0	100 100
58	SU	94/107 (88%)	93 (99%)	1 (1%)	73 85
59	SV	67/67 (100%)	67 (100%)	0	100 100
60	SW	112/113 (99%)	111 (99%)	1 (1%)	78 87
61	SX	113/115 (98%)	113 (100%)	0	100 100
62	SY	113/115 (98%)	111 (98%)	2 (2%)	59 78
63	SZ	53/103 (52%)	53 (100%)	0	100 100
64	Sa	89/98 (91%)	89 (100%)	0	100 100
65	Sb	75/76 (99%)	75 (100%)	0	100 100
66	Sc	57/62 (92%)	57 (100%)	0	100 100
67	Sd	46/49 (94%)	46 (100%)	0	100 100
68	Se	47/48 (98%)	47 (100%)	0	100 100
69	Sg	272/275 (99%)	272 (100%)	0	100 100
70	CB	642/730 (88%)	640 (100%)	2 (0%)	92 96
71	SG	207/218 (95%)	205 (99%)	2 (1%)	76 86
72	SJ	161/168 (96%)	160 (99%)	1 (1%)	86 91
73	SC	185/225 (82%)	185 (100%)	0	100 100
74	SF	154/170 (91%)	153 (99%)	1 (1%)	86 91
75	SH	166/174 (95%)	166 (100%)	0	100 100
76	SD	190/202 (94%)	189 (100%)	1 (0%)	88 93
77	SE	224/225 (100%)	224 (100%)	0	100 100
78	SI	178/180 (99%)	177 (99%)	1 (1%)	86 91
79	SK	89/136 (65%)	89 (100%)	0	100 100
80	SL	133/142 (94%)	132 (99%)	1 (1%)	81 89
All	All	10233/11605 (88%)	10200 (100%)	33 (0%)	92 96

All (33) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	LC	188	ARG

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Mol	Chain	Res	Type
6	LC	348	LYS
9	LF	29	LYS
10	LG	259	LYS
14	LL	145	LYS
20	LR	151	ARG
22	LT	107	LYS
22	LT	117	LYS
23	LU	17	GLN
24	LV	48	ARG
26	LX	67	ARG
27	LY	130	LYS
31	Lc	23	LYS
31	Lc	106	ARG
32	Ld	67	ARG
37	Li	4	ARG
38	Lj	85	LYS
54	SQ	106	LYS
55	SR	5	ARG
55	SR	72	LYS
58	SU	34	LYS
60	SW	28	ARG
62	SY	118	ARG
62	SY	132	LYS
70	CB	400	LYS
70	CB	630	GLN
71	SG	98	ARG
71	SG	119	LYS
72	SJ	17	ARG
74	SF	145	ARG
76	SD	76	ARG
78	SI	140	LYS
80	SL	69	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (25) such sidechains are listed below:

Mol	Chain	Res	Type
7	LD	198	HIS
10	LG	64	GLN
21	LS	77	ASN
21	LS	108	GLN
27	LY	14	ASN
30	Lb	58	GLN

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Mol	Chain	Res	Type
31	Lc	50	ASN
35	Lg	110	GLN
39	Lk	58	GLN
43	Lo	21	HIS
50	SB	75	GLN
57	ST	142	ASN
62	SY	22	GLN
69	Sg	133	ASN
70	CB	27	HIS
71	SG	13	GLN
72	SJ	111	GLN
72	SJ	125	HIS
74	SF	148	ASN
75	SH	97	GLN
75	SH	114	GLN
76	SD	101	GLN
77	SE	138	HIS
79	SK	7	ASN
79	SK	44	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3644/5070 (71%)	814 (22%)	20 (0%)
2	L7	119/121 (98%)	11 (9%)	0
3	L8	155/157 (98%)	30 (19%)	0
46	S2	1715/1869 (91%)	410 (23%)	8 (0%)
48	E	78/85 (91%)	26 (33%)	1 (1%)
All	All	5711/7302 (78%)	1291 (22%)	29 (0%)

All (1291) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	2	G
1	L5	25	A
1	L5	26	C
1	L5	39	A
1	L5	42	A
1	L5	48	G
1	L5	56	A
1	L5	59	A

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Mol	Chain	Res	Type
1	L5	64	A
1	L5	65	A
1	L5	66	A
1	L5	73	A
1	L5	74	G
1	L5	91	G
1	L5	98	A
1	L5	104	G
1	L5	108	A
1	L5	109	G
1	L5	110	C
1	L5	119	G
1	L5	120	A
1	L5	127	G
1	L5	132	G
1	L5	133	C
1	L5	134	G
1	L5	135	G
1	L5	145	G
1	L5	152	U
1	L5	159	C
1	L5	165	A
1	L5	166	C
1	L5	171	U
1	L5	173	C
1	L5	181	C
1	L5	183	C
1	L5	184	U
1	L5	185	C
1	L5	187	U
1	L5	188	G
1	L5	189	G
1	L5	200	U
1	L5	209	U
1	L5	216	C
1	L5	218	A
1	L5	220	C
1	L5	234	G
1	L5	237	G
1	L5	250	C
1	L5	255	C
1	L5	256	G

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Mol	Chain	Res	Type
1	L5	258	G
1	L5	261	G
1	L5	264	C
1	L5	265	C
1	L5	266	C
1	L5	267	G
1	L5	269	G
1	L5	275	C
1	L5	280	G
1	L5	297	U
1	L5	306	A
1	L5	315	G
1	L5	316	U
1	L5	340	C
1	L5	350	C
1	L5	373	G
1	L5	387	G
1	L5	388	A
1	L5	407	A
1	L5	408	A
1	L5	409	G
1	L5	410	A
1	L5	411	G
1	L5	412	G
1	L5	413	G
1	L5	431	G
1	L5	432	U
1	L5	449	C
1	L5	450	G
1	L5	452	A
1	L5	453	G
1	L5	454	U
1	L5	456	C
1	L5	457	G
1	L5	467	U
1	L5	468	U
1	L5	483	G
1	L5	484	U
1	L5	485	C
1	L5	486	C
1	L5	489	C
1	L5	493	G

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Mol	Chain	Res	Type
1	L5	494	U
1	L5	495	C
1	L5	497	G
1	L5	498	C
1	L5	499	G
1	L5	500	G
1	L5	501	C
1	L5	502	C
1	L5	503	C
1	L5	504	G
1	L5	505	G
1	L5	506	C
1	L5	509	A
1	L5	510	U
1	L5	512	U
1	L5	513	U
1	L5	514	U
1	L5	518	G
1	L5	643	C
1	L5	645	G
1	L5	646	G
1	L5	654	C
1	L5	655	C
1	L5	656	C
1	L5	657	C
1	L5	658	C
1	L5	659	G
1	L5	665	C
1	L5	666	G
1	L5	667	A
1	L5	668	C
1	L5	673	C
1	L5	685	C
1	L5	686	A
1	L5	687	U
1	L5	688	U
1	L5	696	C
1	L5	703	G
1	L5	704	C
1	L5	706	C
1	L5	731	G
1	L5	738	C

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Mol	Chain	Res	Type
1	L5	739	G
1	L5	742	G
1	L5	744	G
1	L5	746	A
1	L5	753	C
1	L5	758	G
1	L5	759	G
1	L5	904	C
1	L5	907	C
1	L5	913	U
1	L5	914	U
1	L5	915	A
1	L5	917	A
1	L5	918	G
1	L5	923	C
1	L5	924	C
1	L5	926	G
1	L5	932	A
1	L5	933	G
1	L5	934	C
1	L5	935	A
1	L5	936	C
1	L5	937	U
1	L5	944	A
1	L5	945	U
1	L5	959	G
1	L5	960	A
1	L5	961	G
1	L5	962	C
1	L5	965	G
1	L5	966	A
1	L5	967	C
1	L5	969	C
1	L5	970	G
1	L5	977	C
1	L5	982	U
1	L5	984	C
1	L5	985	C
1	L5	989	U
1	L5	990	C
1	L5	992	C
1	L5	993	G

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Mol	Chain	Res	Type
1	L5	995	C
1	L5	996	G
1	L5	1048	G
1	L5	1049	C
1	L5	1050	C
1	L5	1051	G
1	L5	1070	G
1	L5	1071	C
1	L5	1072	C
1	L5	1074	G
1	L5	1075	G
1	L5	1082	C
1	L5	1083	U
1	L5	1095	A
1	L5	1168	G
1	L5	1171	G
1	L5	1172	C
1	L5	1173	G
1	L5	1179	U
1	L5	1180	C
1	L5	1181	C
1	L5	1182	C
1	L5	1183	C
1	L5	1184	A
1	L5	1193	C
1	L5	1200	G
1	L5	1202	C
1	L5	1203	G
1	L5	1204	C
1	L5	1210	C
1	L5	1211	G
1	L5	1214	C
1	L5	1215	C
1	L5	1216	C
1	L5	1217	G
1	L5	1218	G
1	L5	1219	G
1	L5	1222	A
1	L5	1235	G
1	L5	1241	C
1	L5	1242	G
1	L5	1243	C

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Mol	Chain	Res	Type
1	L5	1245	C
1	L5	1246	G
1	L5	1247	U
1	L5	1253	G
1	L5	1254	A
1	L5	1255	A
1	L5	1257	A
1	L5	1258	G
1	L5	1261	G
1	L5	1266	G
1	L5	1267	C
1	L5	1269	G
1	L5	1270	A
1	L5	1271	G
1	L5	1272	C
1	L5	1273	G
1	L5	1274	A
1	L5	1275	G
1	L5	1280	C
1	L5	1284	G
1	L5	1285	U
1	L5	1287	G
1	L5	1294	A
1	L5	1295	C
1	L5	1296	G
1	L5	1301	C
1	L5	1326	A
1	L5	1337	A
1	L5	1354	A
1	L5	1358	G
1	L5	1359	G
1	L5	1365	C
1	L5	1367	C
1	L5	1370	G
1	L5	1378	C
1	L5	1379	C
1	L5	1387	A
1	L5	1394	G
1	L5	1397	A
1	L5	1404	G
1	L5	1405	C
1	L5	1407	C

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Mol	Chain	Res	Type
1	L5	1409	C
1	L5	1410	U
1	L5	1411	C
1	L5	1412	G
1	L5	1414	C
1	L5	1415	G
1	L5	1417	C
1	L5	1420	A
1	L5	1437	C
1	L5	1439	C
1	L5	1441	C
1	L5	1443	A
1	L5	1444	G
1	L5	1446	C
1	L5	1447	C
1	L5	1482	G
1	L5	1483	C
1	L5	1497	A
1	L5	1498	G
1	L5	1501	C
1	L5	1502	G
1	L5	1513	U
1	L5	1516	G
1	L5	1517	G
1	L5	1518	A
1	L5	1534	A
1	L5	1547	A
1	L5	1562	G
1	L5	1564	A
1	L5	1566	C
1	L5	1574	G
1	L5	1578	U
1	L5	1582	U
1	L5	1591	U
1	L5	1596	U
1	L5	1624	G
1	L5	1625	G
1	L5	1631	A
1	L5	1633	G
1	L5	1634	A
1	L5	1638	A
1	L5	1640	C

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Mol	Chain	Res	Type
1	L5	1654	G
1	L5	1661	C
1	L5	1676	C
1	L5	1677	U
1	L5	1678	C
1	L5	1698	C
1	L5	1699	A
1	L5	1700	G
1	L5	1703	C
1	L5	1704	C
1	L5	1705	G
1	L5	1707	C
1	L5	1708	G
1	L5	1709	C
1	L5	1717	C
1	L5	1718	C
1	L5	1726	U
1	L5	1734	G
1	L5	1741	G
1	L5	1742	A
1	L5	1750	G
1	L5	1757	U
1	L5	1758	G
1	L5	1760	G
1	L5	1761	G
1	L5	1762	C
1	L5	1763	C
1	L5	1764	G
1	L5	1765	A
1	L5	1766	A
1	L5	1767	A
1	L5	1768	C
1	L5	1769	G
1	L5	1770	A
1	L5	1775	A
1	L5	1787	A
1	L5	1797	G
1	L5	1804	A
1	L5	1810	G
1	L5	1815	G
1	L5	1820	C
1	L5	1821	G

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Mol	Chain	Res	Type
1	L5	1822	U
1	L5	1834	U
1	L5	1836	G
1	L5	1837	A
1	L5	1842	G
1	L5	1843	A
1	L5	1855	G
1	L5	1869	G
1	L5	1882	U
1	L5	1889	U
1	L5	1897	A
1	L5	1917	A
1	L5	1918	U
1	L5	1919	G
1	L5	1920	C
1	L5	1921	C
1	L5	1922	G
1	L5	1925	G
1	L5	1931	C
1	L5	1932	A
1	L5	1936	C
1	L5	1940	G
1	L5	1948	G
1	L5	1949	U
1	L5	1959	U
1	L5	1961	G
1	L5	1962	A
1	L5	1968	G
1	L5	1972	G
1	L5	1974	U
1	L5	1975	G
1	L5	1978	C
1	L5	1980	U
1	L5	1981	G
1	L5	1982	G
1	L5	1984	A
1	L5	1985	G
1	L5	1991	A
1	L5	1992	U
1	L5	1993	C
1	L5	1997	U
1	L5	2002	A

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Mol	Chain	Res	Type
1	L5	2004	U
1	L5	2011	C
1	L5	2017	A
1	L5	2018	C
1	L5	2024	G
1	L5	2026	A
1	L5	2034	G
1	L5	2046	G
1	L5	2048	U
1	L5	2055	G
1	L5	2056	G
1	L5	2069	A
1	L5	2084	C
1	L5	2085	G
1	L5	2091	C
1	L5	2092	G
1	L5	2093	A
1	L5	2095	A
1	L5	2096	G
1	L5	2097	U
1	L5	2098	G
1	L5	2101	C
1	L5	2102	G
1	L5	2107	C
1	L5	2108	G
1	L5	2111	G
1	L5	2112	G
1	L5	2250	C
1	L5	2252	G
1	L5	2253	A
1	L5	2255	C
1	L5	2256	C
1	L5	2257	C
1	L5	2258	C
1	L5	2259	G
1	L5	2260	C
1	L5	2277	C
1	L5	2289	C
1	L5	2300	A
1	L5	2301	G
1	L5	2313	A
1	L5	2316	G

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Mol	Chain	Res	Type
1	L5	2333	G
1	L5	2348	G
1	L5	2351	C
1	L5	2360	A
1	L5	2364	G
1	L5	2369	U
1	L5	2397	G
1	L5	2412	A
1	L5	2417	A
1	L5	2418	A
1	L5	2421	G
1	L5	2425	U
1	L5	2441	C
1	L5	2450	G
1	L5	2464	C
1	L5	2465	C
1	L5	2469	C
1	L5	2474	G
1	L5	2475	G
1	L5	2478	C
1	L5	2479	G
1	L5	2483	G
1	L5	2484	A
1	L5	2485	U
1	L5	2487	G
1	L5	2488	C
1	L5	2489	C
1	L5	2490	U
1	L5	2491	C
1	L5	2494	U
1	L5	2503	G
1	L5	2504	C
1	L5	2505	C
1	L5	2506	G
1	L5	2513	A
1	L5	2519	U
1	L5	2520	C
1	L5	2537	A
1	L5	2544	G
1	L5	2546	G
1	L5	2547	G
1	L5	2554	U

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Mol	Chain	Res	Type
1	L5	2555	G
1	L5	2557	G
1	L5	2559	G
1	L5	2560	C
1	L5	2565	A
1	L5	2567	G
1	L5	2568	C
1	L5	2573	A
1	L5	2583	C
1	L5	2587	A
1	L5	2589	C
1	L5	2601	A
1	L5	2618	G
1	L5	2627	C
1	L5	2652	G
1	L5	2653	C
1	L5	2662	G
1	L5	2664	G
1	L5	2669	C
1	L5	2673	G
1	L5	2676	A
1	L5	2686	G
1	L5	2687	U
1	L5	2694	G
1	L5	2695	A
1	L5	2696	A
1	L5	2703	G
1	L5	2707	U
1	L5	2708	U
1	L5	2710	C
1	L5	2711	G
1	L5	2724	G
1	L5	2725	A
1	L5	2726	G
1	L5	2739	C
1	L5	2742	G
1	L5	2743	A
1	L5	2746	A
1	L5	2756	G
1	L5	2759	G
1	L5	2761	U
1	L5	2763	U

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Mol	Chain	Res	Type
1	L5	2764	A
1	L5	2769	U
1	L5	2770	C
1	L5	2787	A
1	L5	2788	U
1	L5	2790	U
1	L5	2815	A
1	L5	2826	U
1	L5	2827	G
1	L5	2829	U
1	L5	2838	G
1	L5	2848	G
1	L5	2855	G
1	L5	2877	G
1	L5	2892	C
1	L5	2900	U
1	L5	2902	G
1	L5	2903	G
1	L5	2904	U
1	L5	2905	C
1	L5	2906	G
1	L5	2908	U
1	L5	3587	C
1	L5	3588	C
1	L5	3590	G
1	L5	3591	C
1	L5	3594	C
1	L5	3595	U
1	L5	3596	A
1	L5	3597	G
1	L5	3598	C
1	L5	3599	A
1	L5	3605	C
1	L5	3615	G
1	L5	3618	C
1	L5	3626	G
1	L5	3635	A
1	L5	3644	U
1	L5	3646	A
1	L5	3662	A
1	L5	3664	G
1	L5	3670	C

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Mol	Chain	Res	Type
1	L5	3672	G
1	L5	3673	C
1	L5	3674	G
1	L5	3685	C
1	L5	3727	A
1	L5	3735	G
1	L5	3740	G
1	L5	3750	G
1	L5	3753	G
1	L5	3756	A
1	L5	3757	G
1	L5	3759	A
1	L5	3760	A
1	L5	3761	C
1	L5	3772	U
1	L5	3773	U
1	L5	3776	G
1	L5	3777	G
1	L5	3784	A
1	L5	3786	U
1	L5	3802	U
1	L5	3807	A
1	L5	3811	G
1	L5	3814	U
1	L5	3817	A
1	L5	3818	U
1	L5	3819	G
1	L5	3823	G
1	L5	3838	U
1	L5	3840	U
1	L5	3841	C
1	L5	3867	A
1	L5	3877	A
1	L5	3878	C
1	L5	3879	G
1	L5	3885	G
1	L5	3887	C
1	L5	3890	A
1	L5	3892	U
1	L5	3897	G
1	L5	3901	A
1	L5	3906	A

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Mol	Chain	Res	Type
1	L5	3907	G
1	L5	3908	A
1	L5	3915	U
1	L5	3916	G
1	L5	3920	U
1	L5	3922	G
1	L5	3938	G
1	L5	3939	G
1	L5	3942	A
1	L5	3943	A
1	L5	3947	A
1	L5	3948	C
1	L5	3949	A
1	L5	3950	U
1	L5	3951	G
1	L5	4062	A
1	L5	4063	U
1	L5	4064	C
1	L5	4065	G
1	L5	4076	G
1	L5	4084	G
1	L5	4086	G
1	L5	4091	G
1	L5	4092	G
1	L5	4093	G
1	L5	4094	G
1	L5	4096	C
1	L5	4097	G
1	L5	4099	G
1	L5	4100	C
1	L5	4101	C
1	L5	4102	C
1	L5	4104	G
1	L5	4108	G
1	L5	4111	U
1	L5	4113	U
1	L5	4114	C
1	L5	4115	G
1	L5	4116	C
1	L5	4117	U
1	L5	4119	C
1	L5	4121	G

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Mol	Chain	Res	Type
1	L5	4122	G
1	L5	4127	A
1	L5	4133	C
1	L5	4134	C
1	L5	4140	C
1	L5	4141	G
1	L5	4142	C
1	L5	4143	G
1	L5	4144	C
1	L5	4146	G
1	L5	4150	G
1	L5	4160	C
1	L5	4162	C
1	L5	4163	U
1	L5	4170	A
1	L5	4177	C
1	L5	4183	G
1	L5	4184	G
1	L5	4191	G
1	L5	4196	G
1	L5	4203	A
1	L5	4212	A
1	L5	4222	G
1	L5	4229	U
1	L5	4233	A
1	L5	4249	G
1	L5	4251	A
1	L5	4254	G
1	L5	4255	A
1	L5	4265	U
1	L5	4268	A
1	L5	4273	A
1	L5	4281	A
1	L5	4291	G
1	L5	4305	G
1	L5	4314	C
1	L5	4329	G
1	L5	4330	G
1	L5	4332	C
1	L5	4339	A
1	L5	4349	C
1	L5	4354	U

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Mol	Chain	Res	Type
1	L5	4373	G
1	L5	4376	A
1	L5	4377	G
1	L5	4378	A
1	L5	4380	A
1	L5	4387	C
1	L5	4394	A
1	L5	4405	G
1	L5	4421	C
1	L5	4422	A
1	L5	4448	G
1	L5	4449	A
1	L5	4452	U
1	L5	4453	C
1	L5	4464	A
1	L5	4466	C
1	L5	4475	G
1	L5	4488	A
1	L5	4500	U
1	L5	4502	C
1	L5	4512	U
1	L5	4513	A
1	L5	4519	C
1	L5	4524	G
1	L5	4545	G
1	L5	4548	A
1	L5	4549	G
1	L5	4560	C
1	L5	4567	G
1	L5	4573	G
1	L5	4575	G
1	L5	4584	A
1	L5	4589	A
1	L5	4590	A
1	L5	4600	G
1	L5	4617	G
1	L5	4627	U
1	L5	4636	U
1	L5	4637	G
1	L5	4656	A
1	L5	4659	G
1	L5	4670	C

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Mol	Chain	Res	Type
1	L5	4672	A
1	L5	4679	G
1	L5	4695	C
1	L5	4700	A
1	L5	4708	A
1	L5	4709	U
1	L5	4719	G
1	L5	4720	C
1	L5	4733	C
1	L5	4734	A
1	L5	4740	G
1	L5	4741	C
1	L5	4742	G
1	L5	4745	G
1	L5	4746	C
1	L5	4750	G
1	L5	4754	G
1	L5	4757	C
1	L5	4759	C
1	L5	4761	G
1	L5	4765	G
1	L5	4770	U
1	L5	4771	C
1	L5	4773	C
1	L5	4774	C
1	L5	4775	C
1	L5	4776	G
1	L5	4859	C
1	L5	4860	G
1	L5	4863	G
1	L5	4870	G
1	L5	4871	C
1	L5	4875	G
1	L5	4877	G
1	L5	4880	C
1	L5	4882	U
1	L5	4883	C
1	L5	4888	U
1	L5	4889	G
1	L5	4895	C
1	L5	4896	G
1	L5	4897	G

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Mol	Chain	Res	Type
1	L5	4900	C
1	L5	4901	G
1	L5	4902	C
1	L5	4910	G
1	L5	4912	G
1	L5	4914	C
1	L5	4922	C
1	L5	4924	C
1	L5	4925	U
1	L5	4927	G
1	L5	4928	C
1	L5	4934	A
1	L5	4940	C
1	L5	4941	G
1	L5	4943	A
1	L5	4951	G
1	L5	4955	A
1	L5	4960	G
1	L5	4961	G
1	L5	4963	G
1	L5	4966	A
1	L5	4975	G
1	L5	4976	U
1	L5	4988	U
1	L5	4989	U
1	L5	4990	C
1	L5	4991	U
1	L5	5007	A
1	L5	5009	G
1	L5	5013	C
1	L5	5014	A
1	L5	5017	G
1	L5	5022	U
1	L5	5023	C
1	L5	5024	C
1	L5	5025	C
1	L5	5026	U
1	L5	5027	C
1	L5	5028	G
1	L5	5029	C
1	L5	5030	U
1	L5	5031	G

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Mol	Chain	Res	Type
1	L5	5034	A
1	L5	5041	G
1	L5	5050	C
1	L5	5054	C
1	L5	5055	G
1	L5	5061	A
1	L5	5062	G
1	L5	5069	U
2	L7	4	U
2	L7	24	C
2	L7	33	U
2	L7	38	U
2	L7	53	U
2	L7	54	A
2	L7	63	C
2	L7	64	G
2	L7	100	A
2	L7	110	G
2	L7	111	C
3	L8	23	C
3	L8	25	G
3	L8	34	U
3	L8	35	C
3	L8	38	U
3	L8	48	A
3	L8	52	A
3	L8	59	A
3	L8	62	A
3	L8	63	U
3	L8	68	G
3	L8	82	A
3	L8	84	A
3	L8	85	U
3	L8	86	U
3	L8	87	G
3	L8	93	C
3	L8	103	A
3	L8	105	C
3	L8	110	U
3	L8	111	U
3	L8	114	G
3	L8	123	U

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Mol	Chain	Res	Type
3	L8	124	U
3	L8	125	C
3	L8	126	C
3	L8	127	U
3	L8	128	C
3	L8	147	G
3	L8	151	G
46	S2	13	C
46	S2	17	C
46	S2	25	A
46	S2	33	G
46	S2	41	G
46	S2	44	U
46	S2	45	A
46	S2	46	A
46	S2	56	G
46	S2	58	C
46	S2	59	U
46	S2	64	A
46	S2	67	C
46	S2	68	A
46	S2	72	C
46	S2	73	C
46	S2	74	G
46	S2	76	U
46	S2	92	A
46	S2	103	A
46	S2	113	G
46	S2	115	U
46	S2	116	U
46	S2	126	G
46	S2	130	G
46	S2	139	C
46	S2	140	C
46	S2	143	U
46	S2	149	A
46	S2	154	U
46	S2	158	A
46	S2	159	A
46	S2	160	U
46	S2	162	C
46	S2	163	U

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Mol	Chain	Res	Type
46	S2	175	A
46	S2	179	C
46	S2	182	C
46	S2	190	G
46	S2	196	C
46	S2	197	U
46	S2	198	U
46	S2	199	C
46	S2	200	G
46	S2	203	G
46	S2	204	G
46	S2	206	G
46	S2	208	G
46	S2	212	C
46	S2	213	G
46	S2	214	U
46	S2	290	U
46	S2	291	G
46	S2	292	A
46	S2	295	C
46	S2	306	C
46	S2	307	G
46	S2	308	G
46	S2	309	G
46	S2	310	C
46	S2	311	C
46	S2	313	A
46	S2	318	A
46	S2	319	C
46	S2	322	C
46	S2	323	C
46	S2	324	C
46	S2	325	C
46	S2	326	C
46	S2	328	U
46	S2	329	G
46	S2	332	G
46	S2	335	G
46	S2	339	A
46	S2	340	C
46	S2	347	G
46	S2	360	A

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Mol	Chain	Res	Type
46	S2	361	U
46	S2	362	C
46	S2	364	A
46	S2	368	U
46	S2	370	G
46	S2	374	G
46	S2	385	G
46	S2	386	C
46	S2	407	G
46	S2	408	A
46	S2	409	C
46	S2	421	G
46	S2	438	G
46	S2	448	A
46	S2	449	A
46	S2	450	C
46	S2	452	G
46	S2	463	C
46	S2	464	A
46	S2	465	A
46	S2	466	G
46	S2	467	G
46	S2	471	G
46	S2	472	C
46	S2	473	A
46	S2	474	G
46	S2	482	G
46	S2	485	A
46	S2	487	U
46	S2	488	U
46	S2	492	C
46	S2	493	A
46	S2	502	C
46	S2	503	C
46	S2	516	A
46	S2	525	A
46	S2	528	A
46	S2	530	U
46	S2	531	A
46	S2	532	C
46	S2	533	A
46	S2	536	A

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Mol	Chain	Res	Type
46	S2	537	C
46	S2	538	U
46	S2	540	U
46	S2	542	U
46	S2	544	G
46	S2	546	G
46	S2	547	G
46	S2	551	U
46	S2	556	U
46	S2	557	U
46	S2	558	G
46	S2	559	G
46	S2	563	G
46	S2	564	A
46	S2	566	U
46	S2	570	C
46	S2	576	A
46	S2	583	A
46	S2	587	A
46	S2	589	G
46	S2	591	U
46	S2	594	A
46	S2	596	U
46	S2	597	G
46	S2	606	G
46	S2	614	C
46	S2	617	G
46	S2	623	G
46	S2	628	A
46	S2	631	U
46	S2	643	A
46	S2	644	G
46	S2	659	G
46	S2	660	C
46	S2	664	A
46	S2	668	A
46	S2	669	A
46	S2	671	A
46	S2	672	A
46	S2	673	G
46	S2	683	G
46	S2	687	C

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Mol	Chain	Res	Type
46	S2	688	U
46	S2	689	U
46	S2	692	G
46	S2	693	A
46	S2	694	G
46	S2	695	C
46	S2	696	G
46	S2	697	G
46	S2	698	G
46	S2	733	C
46	S2	736	C
46	S2	738	C
46	S2	749	U
46	S2	751	G
46	S2	752	G
46	S2	788	G
46	S2	791	C
46	S2	792	C
46	S2	794	A
46	S2	798	G
46	S2	799	U
46	S2	810	A
46	S2	821	G
46	S2	822	U
46	S2	823	U
46	S2	824	C
46	S2	830	A
46	S2	834	C
46	S2	835	C
46	S2	836	G
46	S2	837	A
46	S2	838	G
46	S2	839	C
46	S2	841	G
46	S2	842	C
46	S2	847	A
46	S2	869	A
46	S2	870	A
46	S2	877	C
46	S2	880	G
46	S2	882	U
46	S2	888	U

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Mol	Chain	Res	Type
46	S2	889	U
46	S2	891	G
46	S2	892	U
46	S2	896	U
46	S2	897	U
46	S2	898	U
46	S2	899	U
46	S2	900	C
46	S2	901	G
46	S2	903	A
46	S2	904	A
46	S2	913	A
46	S2	914	U
46	S2	919	A
46	S2	920	A
46	S2	930	C
46	S2	933	G
46	S2	934	G
46	S2	943	U
46	S2	963	A
46	S2	970	G
46	S2	971	G
46	S2	990	A
46	S2	992	A
46	S2	997	A
46	S2	999	G
46	S2	1001	A
46	S2	1008	A
46	S2	1017	U
46	S2	1018	U
46	S2	1023	A
46	S2	1027	A
46	S2	1042	A
46	S2	1047	C
46	S2	1061	U
46	S2	1062	A
46	S2	1083	A
46	S2	1085	C
46	S2	1088	U
46	S2	1109	C
46	S2	1115	U
46	S2	1116	C

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Mol	Chain	Res	Type
46	S2	1118	C
46	S2	1119	A
46	S2	1121	G
46	S2	1138	C
46	S2	1139	C
46	S2	1148	A
46	S2	1153	C
46	S2	1154	U
46	S2	1195	A
46	S2	1200	A
46	S2	1207	G
46	S2	1208	A
46	S2	1215	C
46	S2	1216	C
46	S2	1217	A
46	S2	1224	G
46	S2	1227	G
46	S2	1242	U
46	S2	1243	U
46	S2	1251	A
46	S2	1253	A
46	S2	1256	G
46	S2	1257	G
46	S2	1259	A
46	S2	1264	C
46	S2	1265	A
46	S2	1274	G
46	S2	1275	G
46	S2	1283	C
46	S2	1286	G
46	S2	1294	G
46	S2	1295	A
46	S2	1301	A
46	S2	1302	G
46	S2	1303	C
46	S2	1306	U
46	S2	1308	U
46	S2	1312	G
46	S2	1320	G
46	S2	1341	C
46	S2	1342	U
46	S2	1348	G

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Mol	Chain	Res	Type
46	S2	1371	U
46	S2	1372	U
46	S2	1373	C
46	S2	1376	A
46	S2	1378	A
46	S2	1401	A
46	S2	1402	A
46	S2	1406	G
46	S2	1408	U
46	S2	1412	C
46	S2	1414	A
46	S2	1415	C
46	S2	1419	C
46	S2	1420	G
46	S2	1421	A
46	S2	1422	G
46	S2	1423	C
46	S2	1424	G
46	S2	1429	G
46	S2	1433	C
46	S2	1435	C
46	S2	1436	C
46	S2	1437	C
46	S2	1438	A
46	S2	1442	U
46	S2	1449	G
46	S2	1454	A
46	S2	1463	U
46	S2	1486	A
46	S2	1489	A
46	S2	1490	G
46	S2	1494	U
46	S2	1497	G
46	S2	1498	A
46	S2	1505	U
46	S2	1507	G
46	S2	1509	U
46	S2	1521	C
46	S2	1522	A
46	S2	1533	A
46	S2	1534	C
46	S2	1536	G

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Mol	Chain	Res	Type
46	S2	1537	A
46	S2	1552	G
46	S2	1553	C
46	S2	1556	A
46	S2	1570	G
46	S2	1575	G
46	S2	1578	U
46	S2	1579	A
46	S2	1580	A
46	S2	1585	U
46	S2	1587	G
46	S2	1588	A
46	S2	1598	G
46	S2	1599	U
46	S2	1600	G
46	S2	1601	A
46	S2	1606	G
46	S2	1607	A
46	S2	1621	U
46	S2	1623	A
46	S2	1633	A
46	S2	1634	A
46	S2	1637	A
46	S2	1638	G
46	S2	1639	G
46	S2	1640	A
46	S2	1644	C
46	S2	1646	C
46	S2	1648	G
46	S2	1654	G
46	S2	1663	A
46	S2	1665	G
46	S2	1671	G
46	S2	1680	G
46	S2	1683	C
46	S2	1699	A
46	S2	1719	A
46	S2	1721	U
46	S2	1722	G
46	S2	1729	U
46	S2	1743	G
46	S2	1744	G

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Mol	Chain	Res	Type
46	S2	1745	A
46	S2	1748	G
46	S2	1752	C
46	S2	1753	C
46	S2	1754	G
46	S2	1756	C
46	S2	1757	G
46	S2	1758	G
46	S2	1760	G
46	S2	1761	U
46	S2	1771	G
46	S2	1772	C
46	S2	1773	C
46	S2	1774	C
46	S2	1775	U
46	S2	1777	G
46	S2	1782	G
46	S2	1783	C
46	S2	1784	G
46	S2	1786	U
46	S2	1798	C
46	S2	1800	A
46	S2	1810	U
46	S2	1812	U
46	S2	1822	A
46	S2	1823	A
46	S2	1824	A
46	S2	1825	A
46	S2	1826	G
46	S2	1829	G
46	S2	1835	A
46	S2	1838	U
46	S2	1849	G
46	S2	1851	A
46	S2	1852	C
46	S2	1861	G
46	S2	1862	G
46	S2	1863	A
46	S2	1865	C
48	E	8	U
48	E	9	G
48	E	13	G

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Mol	Chain	Res	Type
48	E	14	A
48	E	16	U
48	E	17	G
48	E	18	G
48	E	19	U
48	E	20	U
48	E	21	A
48	E	22	A
48	E	24	G
48	E	25	C
48	E	26	G
48	E	40	C
48	E	48	G
48	E	49	U
48	E	50	C
48	E	51	U
48	E	56	G
48	E	57	C
48	E	62	G
48	E	69	U
48	E	70	C
48	E	75	C
48	E	85	A

All (29) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	L5	183	C
1	L5	233	U
1	L5	406	C
1	L5	493	G
1	L5	504	G
1	L5	914	U
1	L5	935	A
1	L5	1082	C
1	L5	1633	G
1	L5	1977	C
1	L5	2033	A
1	L5	2416	G
1	L5	2675	G
1	L5	2760	G
1	L5	2786	C

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Mol	Chain	Res	Type
1	L5	3614	G
1	L5	3673	C
1	L5	4699	U
1	L5	4913	G
1	L5	5061	A
46	S2	112	U
46	S2	158	A
46	S2	291	G
46	S2	420	G
46	S2	563	G
46	S2	688	U
46	S2	1434	C
46	S2	1551	U
48	E	18	G

5.4 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 262 ligands modelled in this entry, 262 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

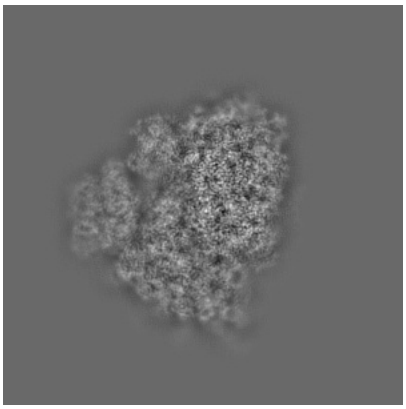
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-37992. These allow visual inspection of the internal detail of the map and identification of artifacts.

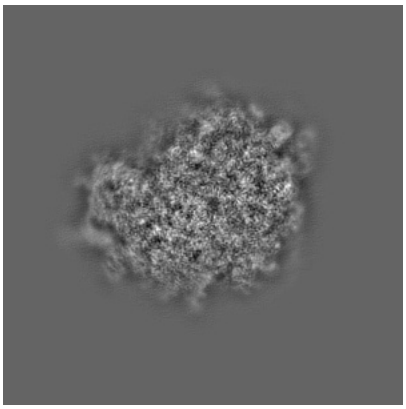
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

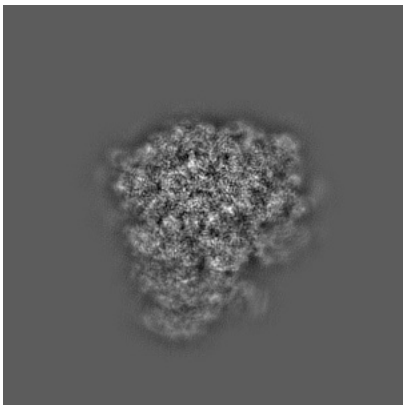
6.1.1 Primary map



X

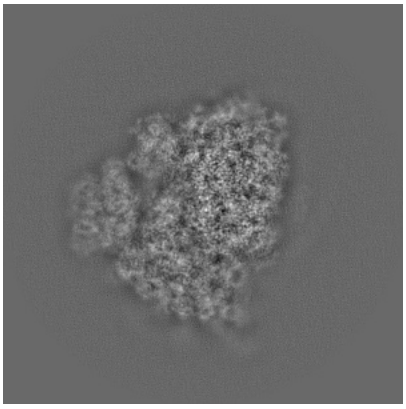


Y

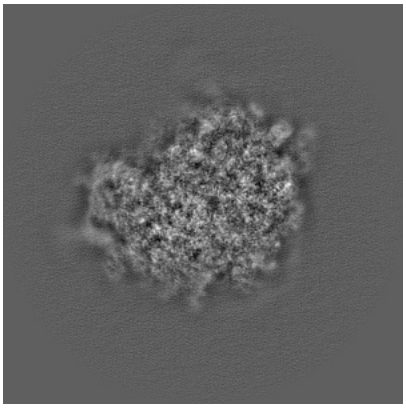


Z

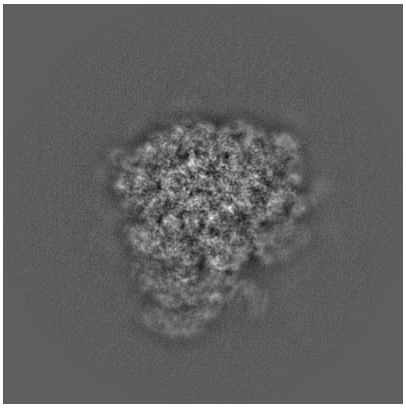
6.1.2 Raw map



X



Y

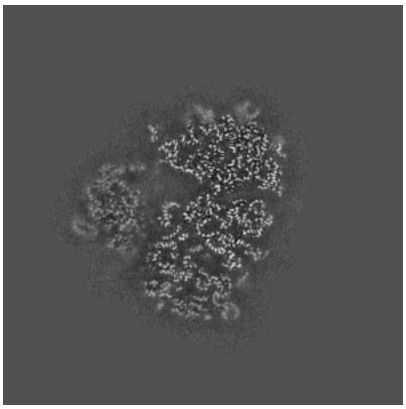


Z

The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map



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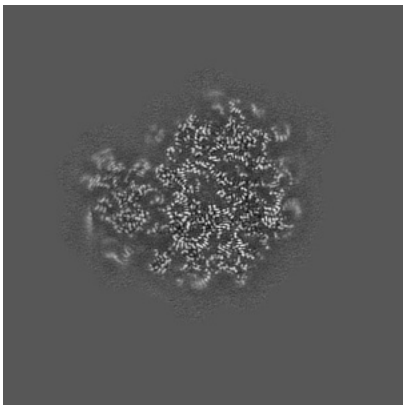
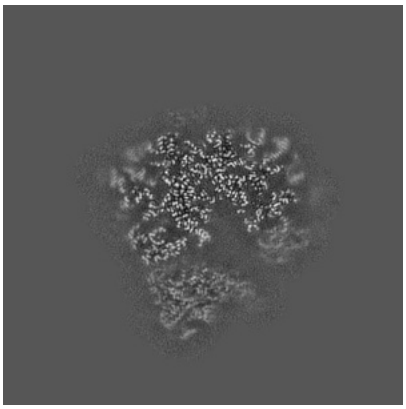
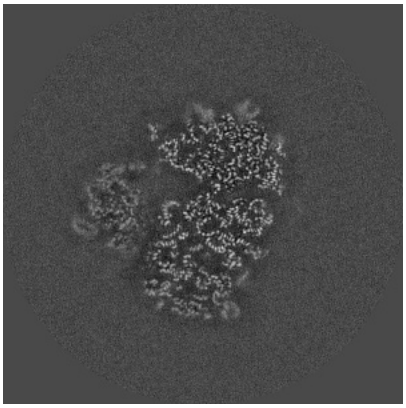


Y Index: 224

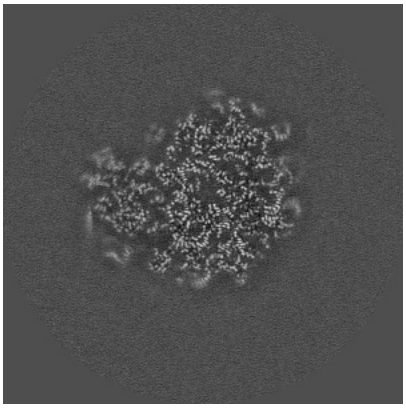


Z Index: 224

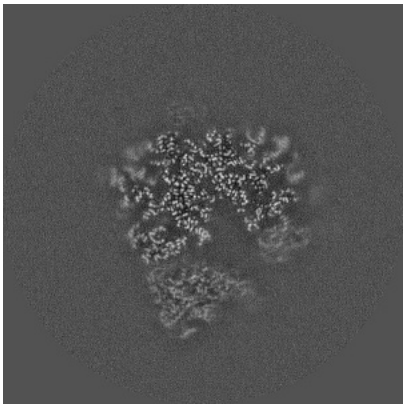
6.2.2 Raw map



X Index: 224



Y Index: 224

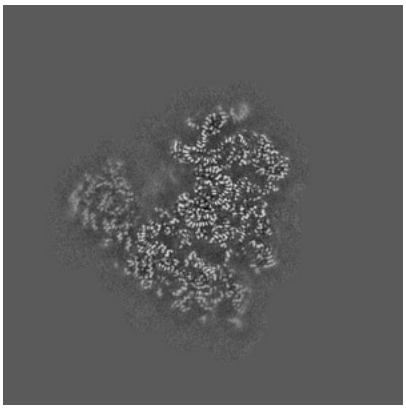


Z Index: 224

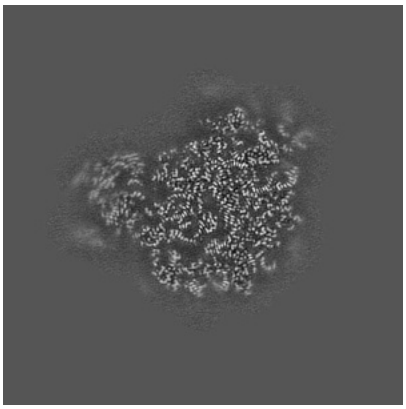
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

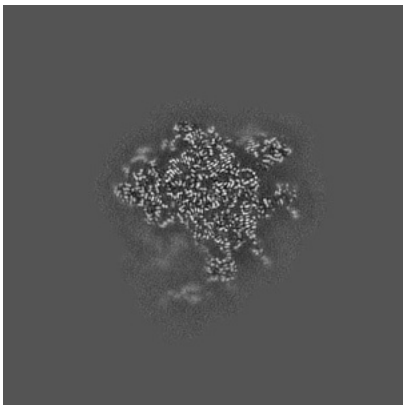
6.3.1 Primary map



X Index: 207

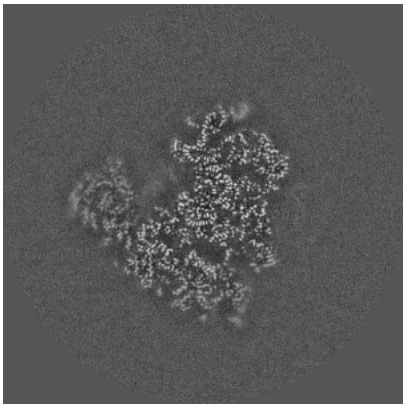


Y Index: 243

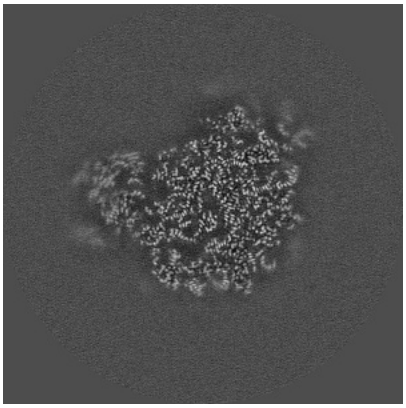


Z Index: 271

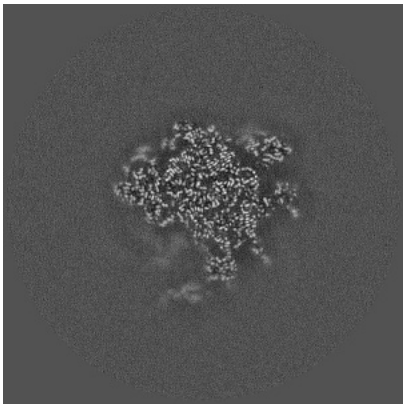
6.3.2 Raw map



X Index: 207



Y Index: 243

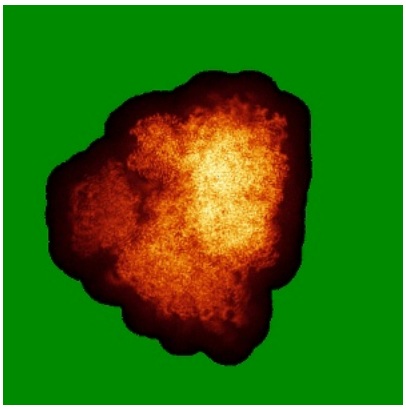


Z Index: 271

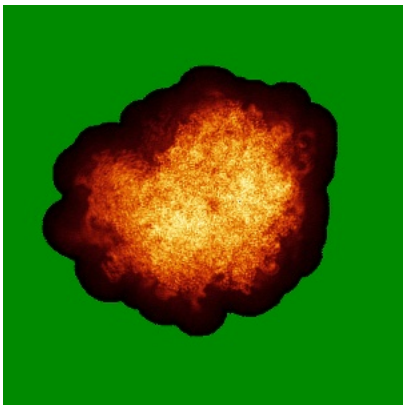
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

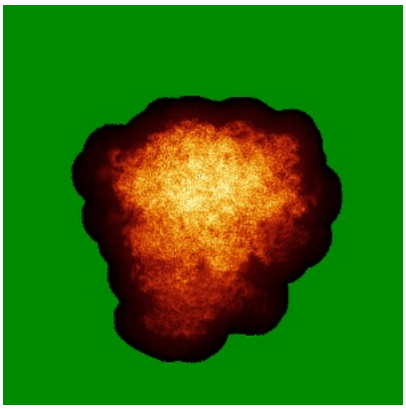
6.4.1 Primary map



X

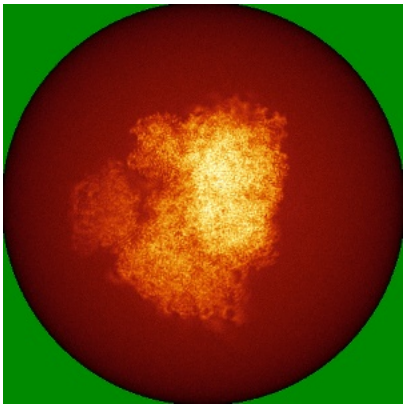


Y

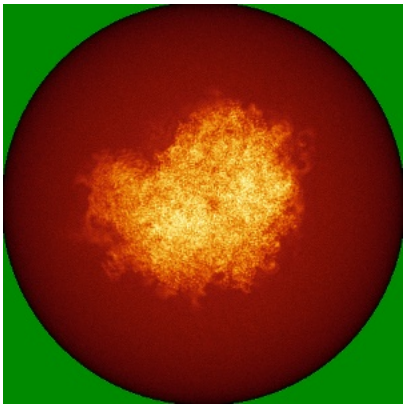


Z

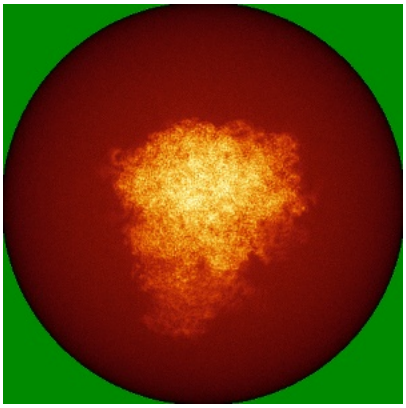
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

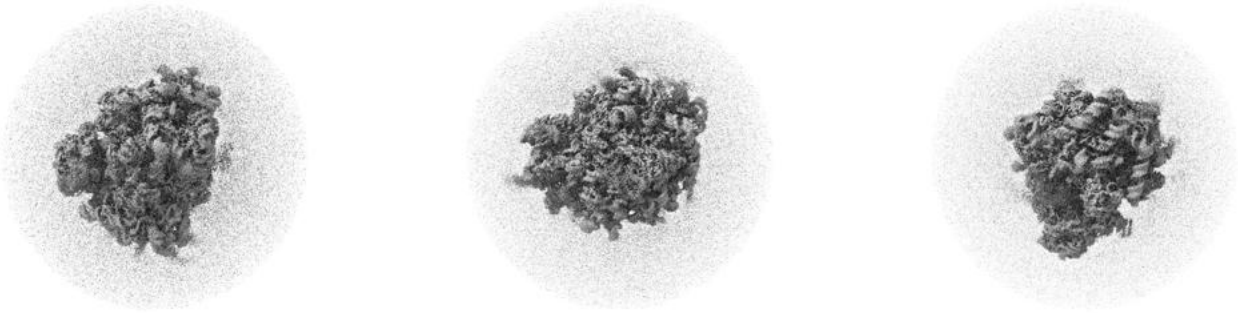
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.005. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

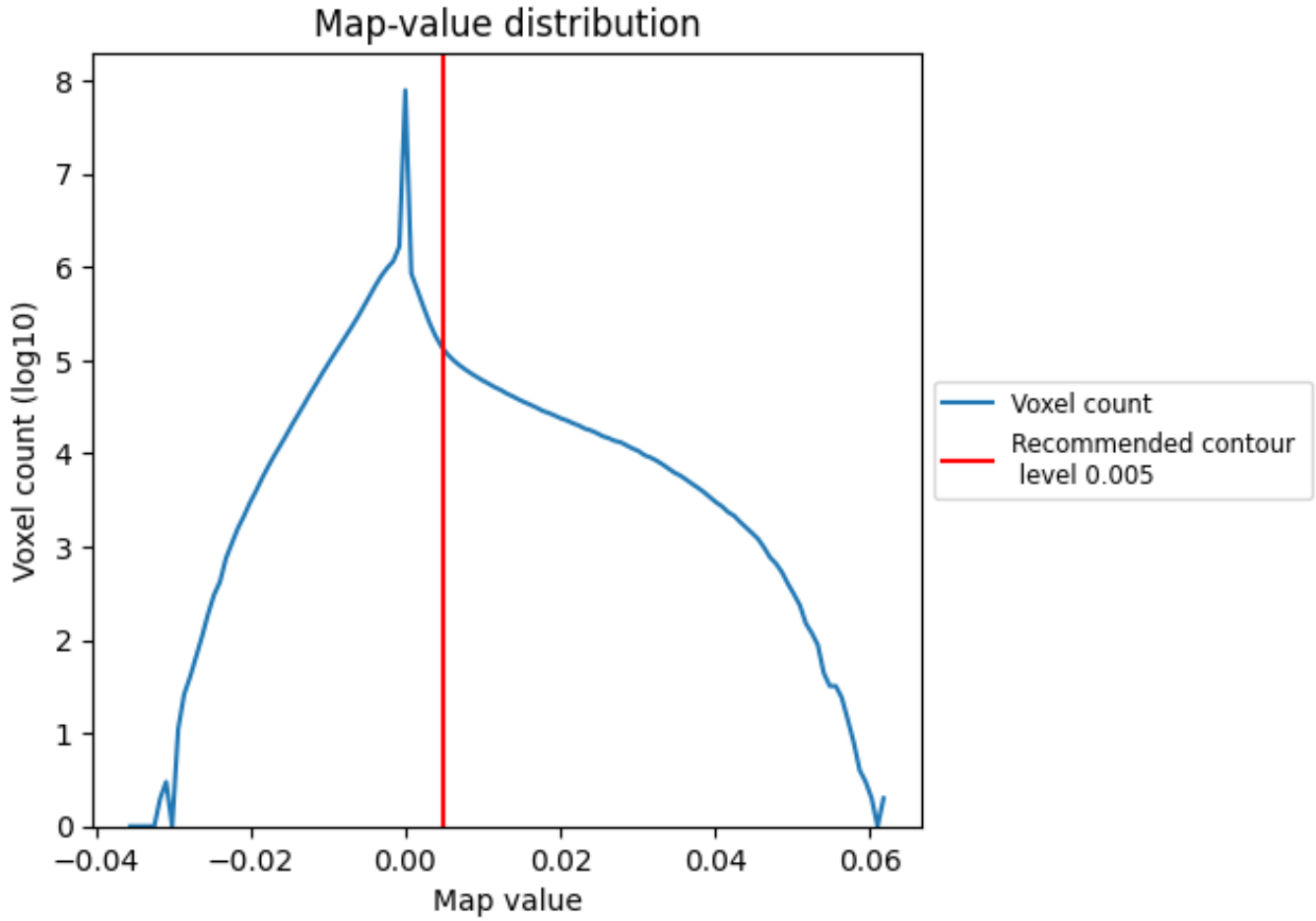
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

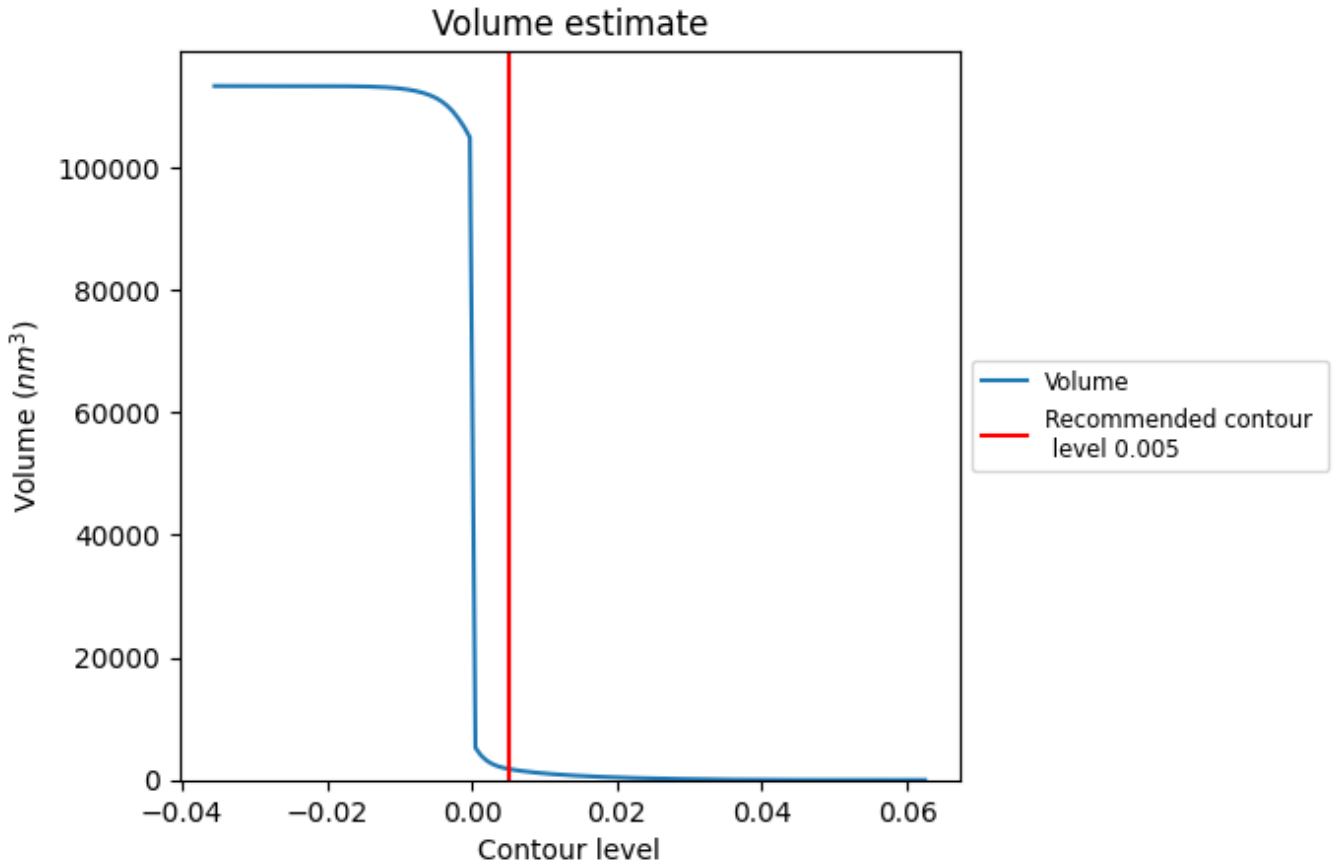
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

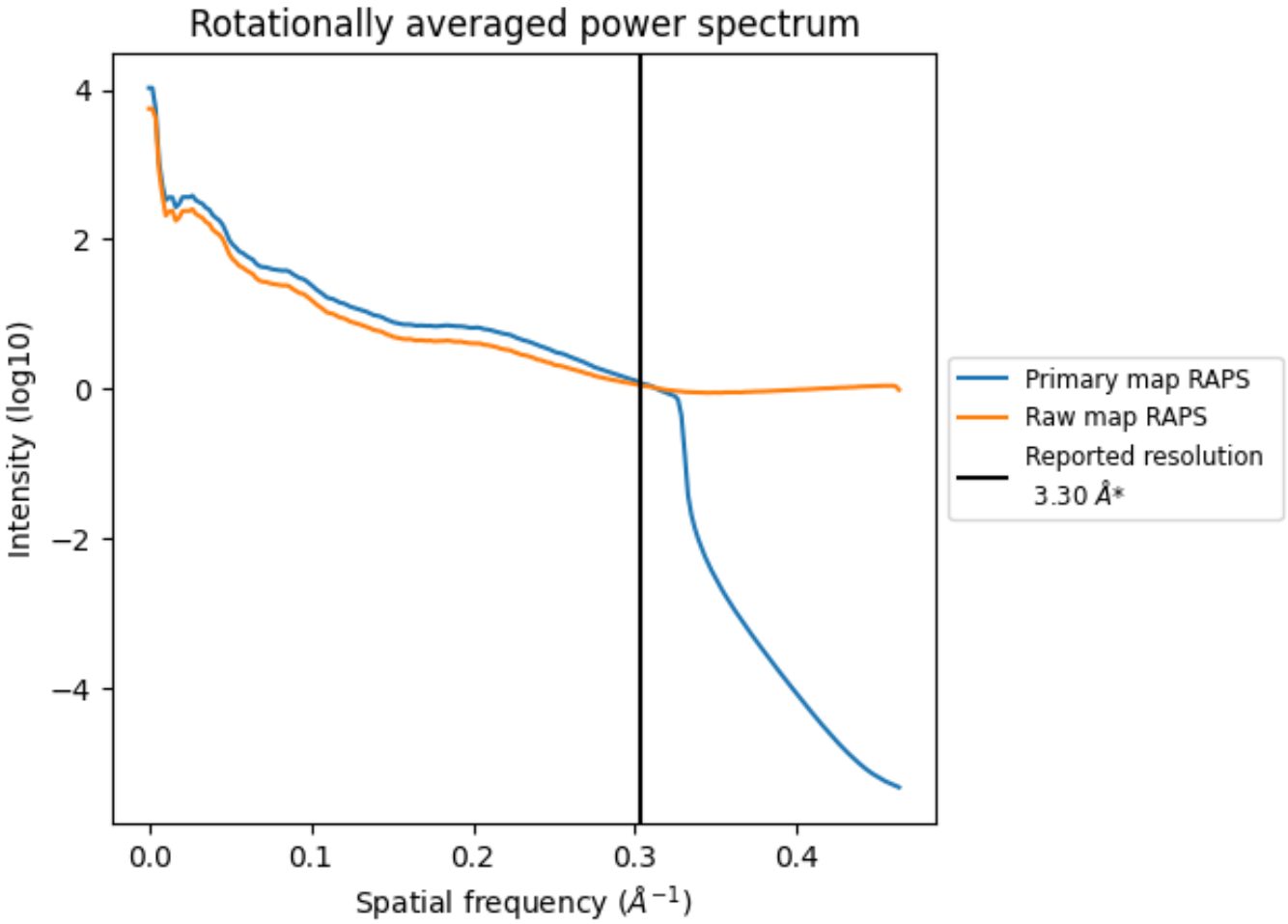
7.2 Volume estimate



The volume at the recommended contour level is 1813 nm^3; this corresponds to an approximate mass of 1637 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

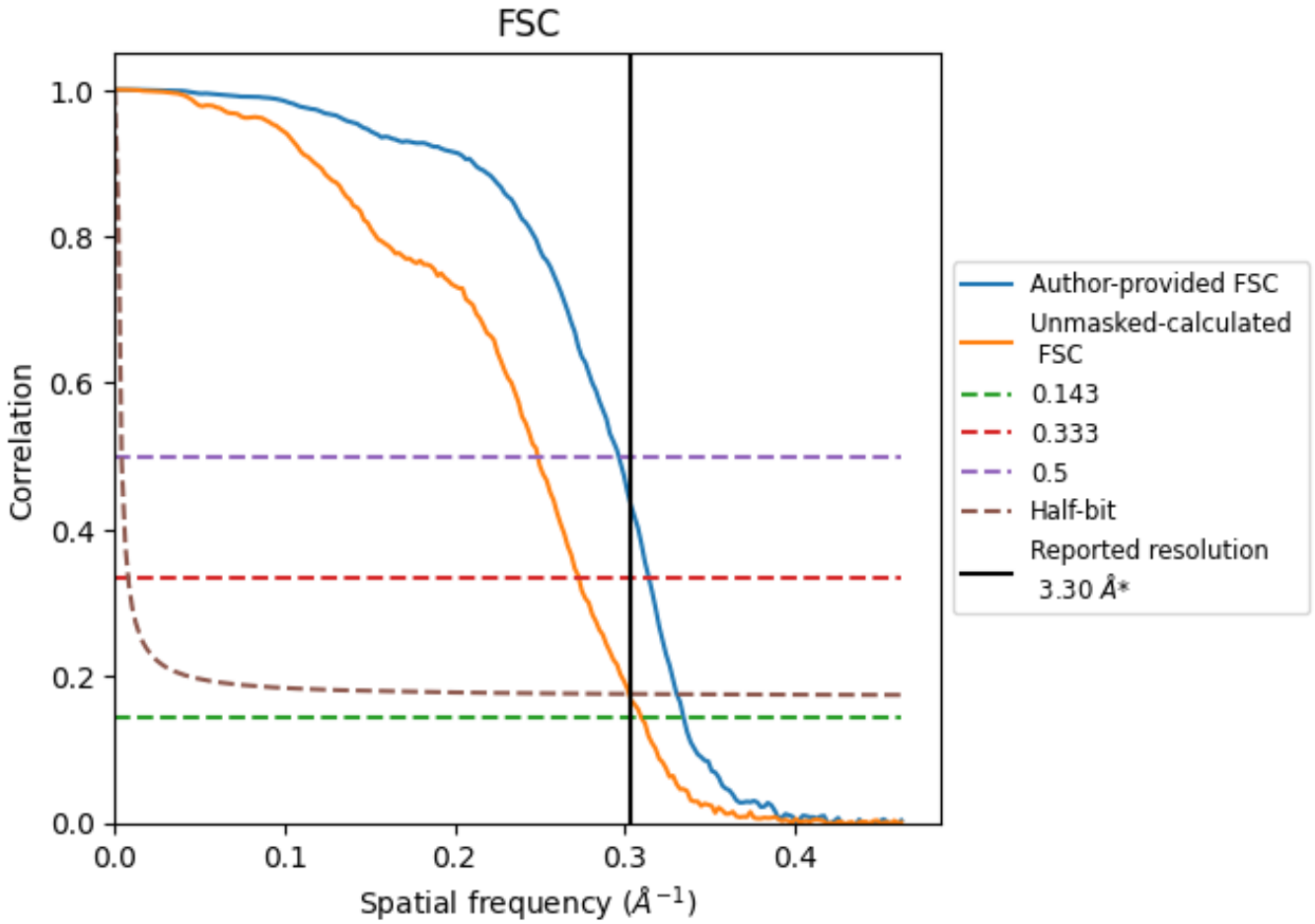


*Reported resolution corresponds to spatial frequency of 0.303 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.303 Å^{-1}

8.2 Resolution estimates (i)

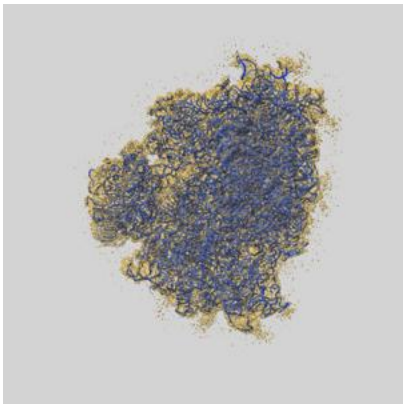
Resolution estimate (Å)	Estimation criterion (FSC cut-off)			
	0.143	0.5	Half-bit	0.333
Reported by author	-	-	-	3.30
Author-provided FSC curve	2.99	3.37	3.02	3.18
Unmasked-calculated*	3.23	4.02	3.30	3.66

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.33 CUT-OFF 3.66 differs from the reported value 3.3 by more than 10 %

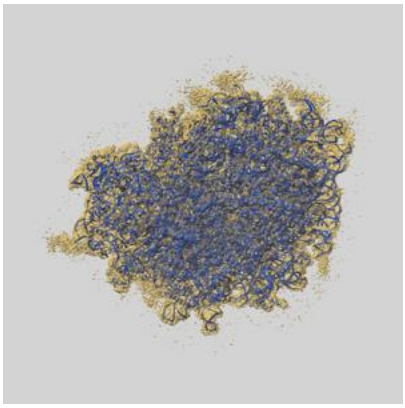
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-37992 and PDB model 8Y0X. Per-residue inclusion information can be found in section 3 on page 19.

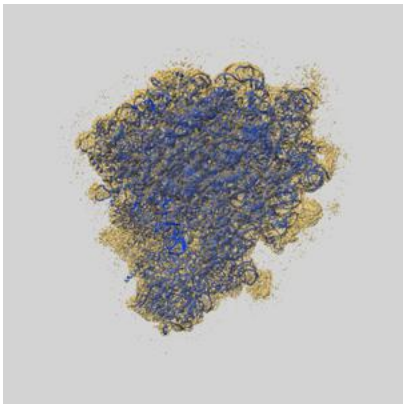
9.1 Map-model overlay



X



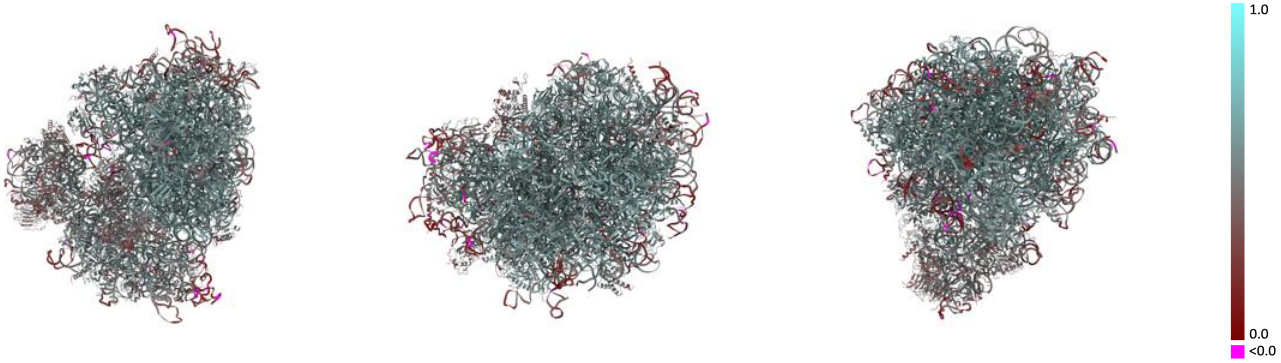
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.005 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

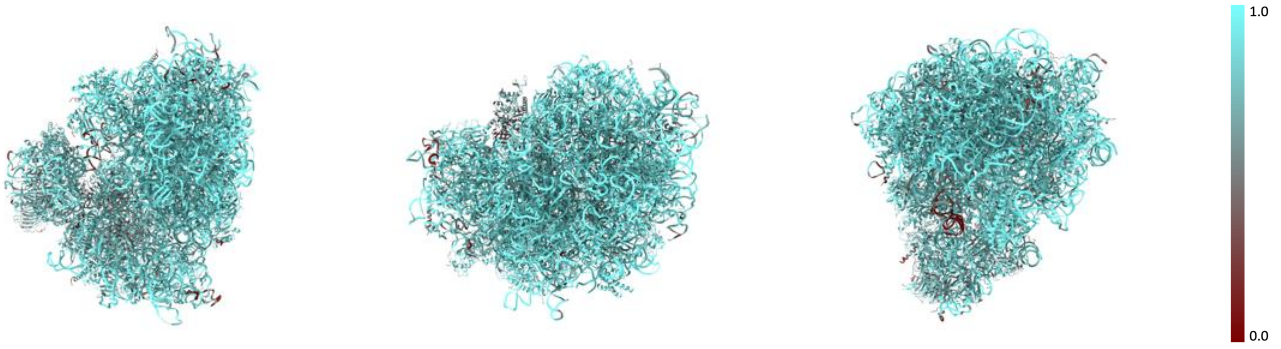
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

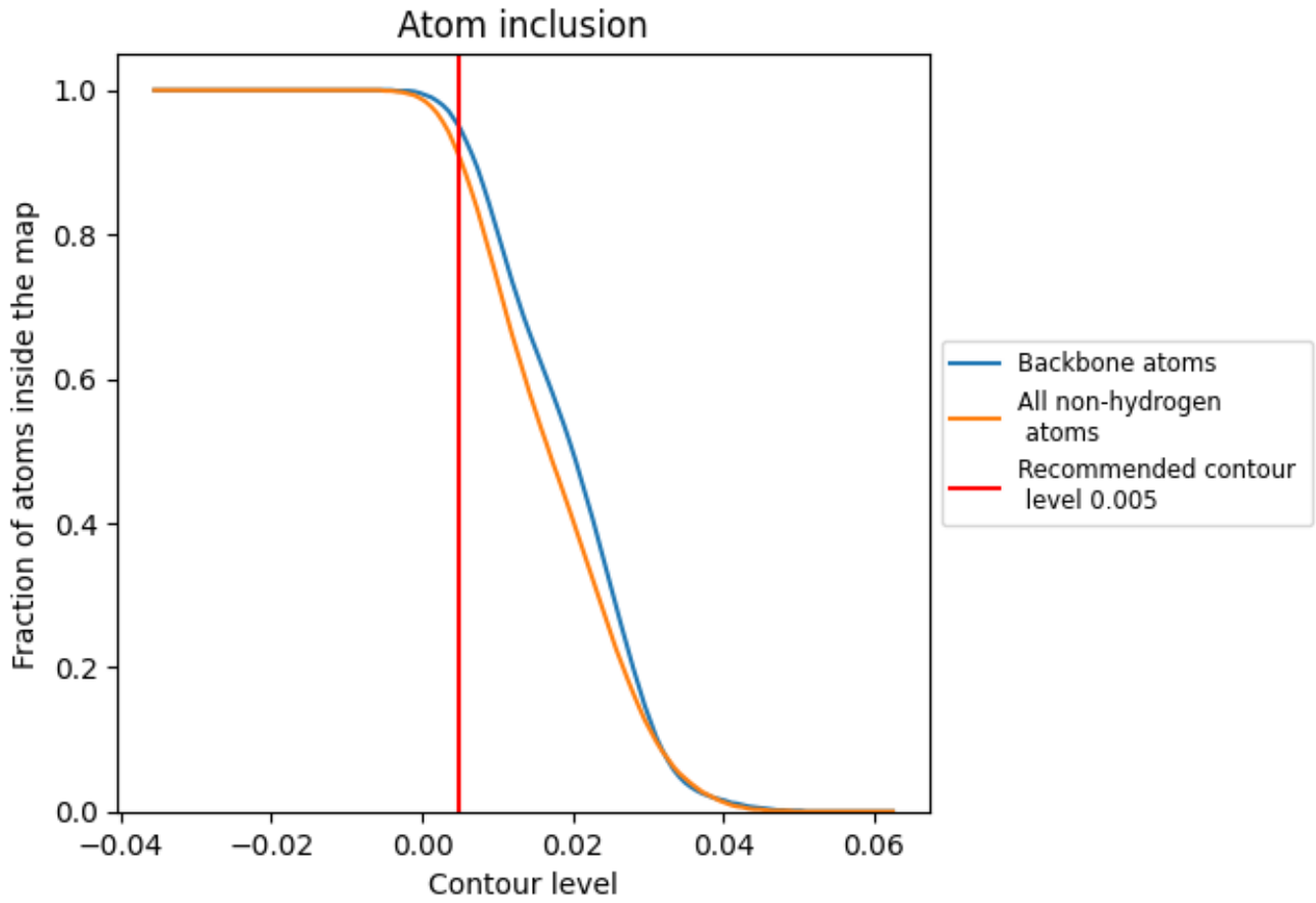
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.005).

9.4 Atom inclusion (i)



At the recommended contour level, 95% of all backbone atoms, 91% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.005) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9070	0.5210
CB	0.5820	0.3940
E	0.3000	0.1720
L5	0.9570	0.5340
L7	0.9980	0.5880
L8	0.9760	0.5580
LA	0.9410	0.5980
LB	0.9390	0.5780
LC	0.9390	0.5720
LD	0.9420	0.5540
LE	0.9090	0.5420
LF	0.9190	0.5770
LG	0.9070	0.5290
LH	0.9380	0.5700
LI	0.9420	0.5800
LJ	0.8850	0.5010
LL	0.9190	0.5530
LM	0.9360	0.5620
LN	0.9280	0.5980
LO	0.9360	0.5820
LP	0.9450	0.5850
LQ	0.9430	0.5990
LR	0.9180	0.5540
LS	0.9520	0.5890
LT	0.9260	0.5690
LU	0.9220	0.5000
LV	0.9430	0.5930
LW	0.9210	0.5850
LX	0.9170	0.5710
LY	0.9220	0.5710
LZ	0.9360	0.5680
La	0.9470	0.5950
Lb	0.8040	0.5000
Lc	0.9260	0.5480
Ld	0.9330	0.5640

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Chain	Atom inclusion	Q-score
Le	0.9340	0.5910
Lf	0.9500	0.5990
Lg	0.9040	0.5680
Lh	0.9130	0.5600
Li	0.9340	0.5550
Lj	0.9290	0.5910
Lk	0.8920	0.5210
Ll	0.8890	0.5680
Lm	0.8990	0.5760
Ln	0.8900	0.5740
Lo	0.9530	0.5840
Lp	0.9200	0.5750
Lr	0.9490	0.5790
S	0.2080	0.4040
S2	0.9390	0.5000
SA	0.8760	0.5080
SB	0.8900	0.5210
SC	0.9030	0.5390
SD	0.7300	0.4300
SE	0.8590	0.5230
SF	0.7300	0.4440
SG	0.8150	0.4380
SH	0.8280	0.4480
SI	0.8750	0.5160
SJ	0.8590	0.5080
SK	0.6980	0.3910
SL	0.8740	0.5540
SN	0.8870	0.5500
SO	0.8890	0.5340
SP	0.7830	0.4370
SQ	0.7190	0.4540
SR	0.7690	0.4440
SS	0.7440	0.4230
ST	0.7300	0.4460
SU	0.7340	0.4080
SV	0.9050	0.5300
SW	0.8980	0.5610
SX	0.8900	0.5470
SY	0.8280	0.4650
SZ	0.6900	0.3610
Sa	0.8800	0.5390
Sb	0.8550	0.4670

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Chain	Atom inclusion	Q-score
Sc	0.6810	0.4260
Sd	0.7520	0.4980
Se	0.7120	0.4450
Sg	0.7010	0.3820